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IN THE

Supreme Court of the United States

OCTOBER TERM, 1996

GREAT PLAINS CHEMICAL CO., INC. LEXTRON INC. and ROBERT C. HUMMEL,

Petitioners,

—v.—

MICRO CHEMICAL, INC.,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED FOR REVIEW

1. Whether the Court of Appeals for the Federal Circuit improperly disregarded Fed. R. Civ. P. 52(a) and this Court's rulings in *Dennison Mfg. Co.* v. *Panduit Corp.*, 475 U.S. 809 (1986), *Anderson* v. *Bessemer City*, 470 U.S. 564 (1985), and *Icicle Seafoods, Inc.* v. *Worthington*, 475 U.S. 709, 89 L.Ed.2d 739 (1986); in reversing the judgment of the district court that the patent-in-suit was invalid for having been placed on sale more than one year prior to the date the application for the patent was filed and for obviousness, when the Federal Circuit's decision was based on *de novo* factual findings contrary to those entered by the district court and the factual findings of the district court were not held to be clearly erroneous?

2. Whether the Court of Appeals for the Federal Circuit erred in reversing the judgment of the district court that all of the asserted claims of the patent-in-suit were invalid when the opinion of the Federal Circuit only discussed the validity of the narrowest claims of the patent-in-suit and upheld their validity based upon limitations not found in the broader claims of the patent?

PARTIES TO THE PROCEEDING

The parties to the proceeding are all identified in the caption of this matter. Lextron, Inc. and Great Plains Chemical Co., Inc., are, in fact, a single Colorado corporation. Great Plains Chemical Co., Inc. changed its name to Lextron, Inc. in 1986. Lextron, Inc. and Micro Chemical have no parent companies or any nonwholly owned subsidiaries.

TABLE OF CONTENTS

	PAGE
QUESTIONS PRESENTED FOR REVIEW	i
PARTIES TO THE PROCEEDING	ii
TABLE OF CONTENTS	iii
TABLE OF AUTHORITIES	v
OPINIONS BELOW	1
JURISDICTION	1
STATUTES AND RULES INVOLVED	1
STATEMENT OF THE CASE	2
1. Introduction	2
2. Procedural History	3
3. The '971 Patent	4
4. The Prior Art	5
5. The Trial Evidence And The District Court's Findings	7
6. The Federal Circuit Opinion	10
REASONS FOR GRANTING THE WRIT OF CERTIORARI	11
ARGUMENT	17

PAGE

I. THE REVERSAL BY THE FEDERAL CIRCUIT OF THE DISTRICT COURT'S FINDING THAT THE '971 PATENT WAS INVALID WAS BASED UPON AN IMPROPER REWEIGHING OF EVIDENCE TO REACH FACTUAL FINDINGS CONTRARY TO THOSE OF THE DISTRICT COURT WHICH HAD NOT BEEN FOUND TO BE CLEARLY ERRONEOUS AND, THEREFORE, VIOLATED FED.R.CIV.P. 52(a) 17

A. The On-Sale Bar Issue 17

B. The Obviousness Issue 21

II. IN REVERSING THE DISTRICT COURT'S FINDING THAT ALL CLAIMS OF THE '971 PATENT WERE INVALID, THE FEDERAL CIRCUIT ERRED IN FAILING TO HAVE SEPARATELY ANALYZED THE BROADER CLAIMS OF THE PATENT THAT CONTAIN NO LIMITATIONS REQUIRING ACCURACY IN WEIGHING OR PROVIDING FOR ISOLATION MEANS TO ACHIEVE SUCH ACCURACY 27

CONCLUSION 30

APPENDIX 1a

TABLE OF AUTHORITIES

Cases

PAGE

Altoona Publix Theatres, Inc. v. American Tri-Ergon Corp., 294 U.S. 477 (1934) 29

Amadeo v. Zant, 486 U.S. 214 (1988) 12

American Sunroof Corp. v. Cars & Concepts, Inc., 660 F. Supp. 1 (E.D.Mich. 1984), *aff'd*, 776 F.2d 1064 (Fed. Cir. 1985) 18

Anderson v. Bessemer City, 470 U.S. 564 (1985) ..... i, 12, 14, 15, 20, 21, 23, 26, 30

Barmag Barmer Maschinenfabrik AG v. Murata Machinery, Ltd., 731 F.2d 831 (Fed. Cir. 1984) .. 18

Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation, 402 U.S. 313 (1971) 16

Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141 (1989) 18, 27

Buildex, Inc. v. Kason Industries, Inc., 849 F.2d 1461 (Fed. Cir. 1988) 18

Calmar, Inc. v. Cook Chemical Co., 383 U.S. 1 (1986) 25

Cardinal Chemical v. Morton International, 508 U.S. 100 (1993) 16

Conopco, Inc. v. May Dept. Stores Co., 46 F.3d 1556 (Fed. Cir. 1994) 13

Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc., 807 F.2d 955 (Fed. Cir. 1986) 26

Dennison Manufacturing Co. v. Panduit Corp., 475 U.S. 809 (1986) ..... i, 12, 14, 15, 21, 26, 30

PAGE

Dow Chemical Co. v. Halliburton Co., 324 U.S. 320 (1945) 16

Envirotech Corp. v. Westech Engineering, Inc., 904 F.2d 1571 (Fed. Cir. 1990) 18

Ferag AG v. Quipp, Inc., 45 F.3d 1562 (Fed. Cir.), *cert. denied*, 116 S. Ct. 71 (1995) 19

Graham v. John Deere Co., 383 U.S.1 (1966) 21

Great A&P Tea Co. v. Supermarket Equipment Co., 340 U.S. 147 (1950) 16, 27

Hughes Aircraft Co. v. United States, 86 F.3d 1566 (Fed. Cir. 1996), *vacated and remanded*, 65 U.S.L.W. 3711 (U.S. 1997) 12

Icicle Seafoods, Inc. v. Worthington, 475 U.S. 709 (1986) ..... i, 12, 14, 15, 26, 30

In re Bell, 991 F.2d 781 (Fed. Cir. 1983) 22

In re Brigance, 792 F.2d 1103 (Fed. Cir. 1986) 20

In Re Dow Chemical Corp., 837 F.2d 469 (Fed. Cir. 1988) 25

Inwood Laboratories, Inc. v. Ives Laboratories, Inc., 456 U.S. 844 (1982) 12

Keystone Retaining Walls Systems, Inc. v. Westrock, Inc., 997 F.2d 1444 (Fed. Cir. 1993)..... 18

King Instruments Corp. v. Otari Corp., 767 F.2d 853 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1016 (1986) 18, 19

L.A. Gear, Inc. v. Thom McAn Shoe Co., 988 F.2d 1117 (Fed. Cir.), *cert. denied*, 510 U.S. 908 (1993) 13

PAGE

Lemelson v. TRW, Inc., 760 F.2d 1254 (Fed. Cir. 1985) 27

Loctite Corp. v. Ultraseal, Ltd., 781 F.2d 861 (Fed. Cir. 1985) 22, 26

Lough v. Brunswick Corp., 103 F.3d 1517 (Fed. Cir. 1997) 13, 14, 15

Micro Chemical, Inc. v. Great Plains Chemical Co., 900 F. Supp. 1386 (D. Colo. 1995) 1, 7, 8, 9, 15, 20, 23, 24, 25, 27, 28

Micro Chemical, Inc. v. Great Plains Chemical Co., 103 F.3d 1538 (Fed. Cir. 1997) .1, 10, 11, 15, 22, 24, 25

Newell Cos. v. Kenney Manufacturing Co., 864 F.2d 757 (Fed. Cir. 1989) 25

Panduit Corp. v. Dennison Manufacturing Co., 810 F.2d 1561 (Fed. Cir.), *cert. denied*, 481 U.S. 1052 (1987) 26

Para-Ordnance Manufacturing, Inc. v. SGS Importers, International, Inc., 73 F.3d 1085 (Fed. Cir. 1995), *cert. denied*, 117 S. Ct. 80 (1996) 22

Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 (Fed. Cir. 1996) 23

RCA Corp. v. Data General Corp., 887 F.2d 1056 (Fed. Cir. 1989) 18, 19

Ryko Manufacturing Co. v. Nu-Star, Inc., 950 F.2d 714 (Fed. Cir. 1991) 22

Sakraida v. AG Pro, Inc., 425 U.S. 273 (1976) 16, 27

Seal-Flex, Inc. v. Athletic Track & Court Construct., 98 F.3d 1318, 1324 (Fed. Cir. 1996) 19

PAGE

Therma-Tru Corp. v. Peachtree Doors, Inc., 44 F.3d 988 (Fed. Cir. 1995) 13

U.M.C. Electronics Co. v. United States, 816 F.2d 647 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1025 (1988) 18, 20

Universal Camera Corp. v. N.L.R.B., 340 U.S. 474 (1951) 12

Western Marine Electronics, Inc. v. Furuno Electric Co., 764 F.2d 840 (Fed. Cir. 1985) 20

Statutes and Rules

28 U.S.C. § 1254 (1) 1

35 U.S.C. § 102(b) 1, 15, 16, 17, 18, 27

35 U.S.C. § 103(a) 1, 16, 17, 27

35 U.S.C. § 282 ..... 2, 27

Fed. R. Civ. P. 52(a) 2, 12, 14, 25

OPINIONS BELOW

The opinion of the Court of Appeals for the Federal Circuit is reported at *Micro Chemical, Inc.* v. *Great Plains Chemical Co.*, 103 F.3d 1538 (Fed. Cir. 1997) and is reprinted in the appendix to this petition commencing at page 1a. Petitioners' petition for rehearing that was denied without opinion on March 3, 1997 is reported on Lexis, 1997 U.S. App. LEXIS 5018 and is reprinted in the appendix at page 76a. The decision and order of the District Court is reported at *Micro Chemical, Inc.* v. *Great Plains Chemical Co.*, 900 F. Supp. 1386 (D. Colo. 1995), and is reprinted in the appendix to this petition commencing at page 32a.

JURISDICTION

The judgment of which review by this Court is sought was entered on January 3, 1997, and rehearing was denied on March 3, 1997. This Court has jurisdiction by virtue of 28 U.S.C. §1254 (1).

STATUTES AND RULES INVOLVED

35 U.S.C. § 102(b):

A person shall be entitled to a patent unless— . . . (b) the invention was. . .in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, ...

35 U.S.C. § 103(a):

A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability

shall not be negatived by the manner in which the invention was made.

35 U.S.C. § 282:

. . .Each claim of a patent (whether in independent, dependent or multiple dependent form) shall be presumed valid independently of the validity of the other claims. . .

Federal Rules of Civil Procedure, Rule 52(a):

In all actions tried upon the facts without a jury or with an advisory jury, the Court shall find the facts specially and state separately in conclusions of law thereon, and judgment shall be entered pursuant to Rule 58; . . . findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity to the trial court to judge the credibility of the witnesses. . . .

STATEMENT OF THE CASE

1. Introduction

In this case, the Federal Circuit reversed the district court's judgment that the patent-in-suit was invalid and, in essence, held that the use of a propeller to mix powdered ingredients and water constituted a patentable invention. The absurdity of the substantive holding is equalled by the gravity of the procedural errors committed by the Federal Circuit in reaching its decision. The Federal Circuit disregarded all of the district court's factual findings without holding any of them to be clearly erroneous, and made its own *de novo* factual findings which directly contradicted the findings of the district court. The Federal Circuit analyzed only the narrowest claims of the patent and, having found them valid, held broader claims of the patent valid that covered very different inventions to which its stated analysis plainly did not apply.

Although the Federal Circuit was created to foster uniformity in the interpretation of this country's patent laws, in recent years the Federal Circuit has all too frequently been overzealous in exercising its authority, confusing its role as arbiter of the patent laws with the lower courts' and juries' roles as finders of fact. This case presents another example of the Federal Circuit ignoring its proper role as an appellate court and reversing a lower court's decision, not because the lower court committed an error in interpreting the patent laws, but because the appellate panel disagreed with the factual conclusions rendered below. This Court should accept certiorari in this case in order to restore the proper balance between trial courts and appellate courts in patent cases.

2. Procedural History

This proceeding was commenced in the United States District Court for the District of Colorado by the filing of a complaint by plaintiff, Micro Chemical, Inc. ("Micro Chemical"), charging defendants,Great Plains Chemical Co., Lextron, Inc. and Robert C. Hummel (collectively "Lextron") with infringement of Micro Chemical's U.S. Patent No. 4,733,971 ("the '971 patent"). Lextron in its answer denied Micro Chemical's charge of patent infringement and counterclaimed, *inter alia*, for a declaratory judgment that the '971 patent was invalid, not infringed and unenforceable due to the plaintiff's and its attorney's inequitable conduct before the Patent Office.

After a trial that lasted more than two weeks on all of the patent liability issues, the district court entered judgment that Micro Chemical's '971 patent was invalid both for obviousness and because Mr. Pratt, the named inventor on the '971 patent and president of Micro Chemical, had offered his patented device to a customer more than one year prior to the date on which he filed his patent application. The district court also found that the '971 patent was not infringed, and that Lextron could not be found liable for inducing infringement.

On appeal, a divided panel of the Federal Circuit reversed the district court's finding that the '971 patent was invalid under Sections 102(b) and 103. Judge Mayer dissented in part, arguing that the majority had improperly disregarded the findings of fact of the trial court on the on-sale bar issue, which had not been found to be clearly erroneous. The Federal Circuit affirmed the district court's finding that Lextron did not infringe certain claims of the '971 patent and also affirmed that Lextron was not liable for inducing infringement. The Federal Circuit remanded the case to the district court so that it could make infringement findings regarding other asserted claims for which the district court had made no express findings.

3. The '971 Patent

The '971 patent discloses and claims methods and apparatus which dispense microingredients by weight for delivery in a liquid carrier to the feed fed to cattle in a cattle feedlot. Microingredients consist of vitamins, antibiotics, hormones and other dietary supplements which are routinely added to cattle feed prior to its consumption by the animals. The use of a microingredient feed additive machine allows for careful measurement of the microingredients and preparation of individual feed batches which vary in microingredient content to be fed to different groups of animals.

The '971 patent contains 94 claims, of which 20 were alleged to be infringed by Lextron. For convenience, the district court adopted the characterization of Micro Chemical's legal expert, that the asserted claims be considered in three discrete groupings.

The broadest claims asserted, claims 74, 91, 93 and 94, were referred to as "mixing" claims during the trial. These claims describe either a method or an apparatus for storing and dispensing the microingredients by weight, including a mechanical mixer for creating a slurry of microingredients and the liquid carrier to be dispensed into the cattle feed.

The next group of broad claims were identified as "cumulative weigh" claims. These claims contain all of the limitations of the "mixing" claims and also call for multiple microingredients to be weighed cumulatively in the weigh hopper prior to being simultaneously dispensed into the liquid carrier.

The narrowest claims of the patent that were asserted against Lextron were characterized as "isolation" claims. These claims include specific limitations to one or more structures that isolate the weighing mechanism from adverse environmental influences, thereby ensuring accurate weighing.

The specification of the '971 patent and Mr. Pratt's testimony at trial make clear that what Mr. Pratt claimed to have invented was a machine that would provide more accurate dispensing of microingredients and more even distribution of those microingredients in the cattle feed than was available from the prior art devices. The commercial weigh machine provided by Micro Chemical to its customers corresponded closely to the preferred embodiment of the invention disclosed in the '971 patent.

4. The Prior Art

Well before the filing of the application for the '971 patent, many feedlots used machines which dispensed the microingredients by volume (rather than by weight as claimed in the '971 patent). The first such machines were invented by Joseph Hawes in the late 1960's. In the Hawes' machines, dry microingredients were stored in individual bins and volumetrically metered into a continuous flow of water in an elongated trough, where they were mixed with the water, pumped out through a port at the lower end of the trough and subsequently delivered to the truck containing the feed ration. The Hawes' system formed a slurry of microingredients and water by the turbulence created in the lower portion of the trough.

Lextron began offering volume machines to cattle feedlots in 1978. Instead of employing a trough of flowing water, Lextron's volume machines operated by dispensing the microingredients into a mix tank partially filled with water, and utilized a motor driven propeller shaft to create a slurry of microingredients and the liquid carrier.

Another microingredient machine manufacturer was Mr. Sherman Brewster, who had worked for Hawes' company for many years. Brewster's volume machines used a round polyethylene pot wherein water was introduced from a ring around the top and the microingredient/water mix was pumped out through an opening in the bottom of the vessel. A microingredient slurry was formed by the turbulence caused by injecting the water into the mix tank under pressure.

In 1982, Brewster developed the first microingredient weigh machine designed specifically for use in a cattle feedlot that was capable of weighing small amounts of microingredients within one gram accuracy and delivering a slurry of microingredients in a liquid carrier to a cattle feed ration. Brewster's initial weigh machine was designed to dispense dry ingredients from individual storage bins into a weigh hopper that was supported on a separate frame from the main frame of the machine. The weighed microingredients were dispensed into the same type of receiving tank that Brewster had used in his volume machines, which was not physically connected to the weigh machine.

Brewster demonstrated his system on December 8, 1982 at the Simplot feedlot in Cauldwell, Idaho. After the machine was shown to be accurate to within one gram, the Simplot Feedlot purchased two of Brewster's machines. When the first machine was installed at the Simplot Feedlot in Grandview, Idaho in 1983, it was found that vibrations from a nearby grain bin were transmitted to the machine. Brewster compensated for these vibrations by placing rubber pads underneath the machine frame, inserting bumpers around the weigh hopper for additional stability, and suspending the weigh hop-

per from the main-frame using rubber straps in order to isolate the weighing mechanism from the adverse effects of the vibrations. After its installation, the machine was found to consistently dispense microingredients with one gram accuracy and was thereafter continuously operated, 365 days a year, from the time of its installation until mid-1988. The second Brewster machine was installed at the Simplot Feedlot in Boardman, Oregon in June, 1983 and also was operated continuously after its installation until 1988.

5. The Trial Evidence And The District Court's Findings

The district court, having heard many days of testimony from Mr. Brewster and defendants' two technical expert witnesses regarding the art of batch weighing systems, found that the most pertinent prior art references consisted of the microingredient weigh machines developed by Mr. Brewster and the Lextron volume machines. The court found

> the *only* differences between the claims of the patent and the Brewster references are that certain claims require that mixing occur in the mixing vessel prior to discharge of the slurry while other claims call for cumulative weighing or multiple weighings of the feed additives before discharge from the weigh hopper.

900 F. Supp. at 1403 (emphasis added). In other words, the district court found that the isolation means or steps disclosed in the '971 patent and covered by the various asserted "isolation" claims had previously been used by Mr. Brewster.

Regarding the "mixing" claims, the court held:

> One having ordinary skill in the batch weigh system art would have been well aware of the option of employing a mechanical mixer in order to obtain a more thorough blending of the feed additives and the water carrier prior to discharge. The Lextron prior art volume machines employed a mechanical mixer for this purpose.

Id. As to the "cumulative weighing" claims, the court similarly held (in part based on Mr. Pratt's testimony) that "cumulative weighing was a well-known expedient in the art." *Id.*

Having noted that it would have been obvious to modify the Brewster weigh machines by adding a mechanical mixer or utilizing cumulative weighing, the district court also found that it would have been obvious to modify the Lextron micro-ingredient volume machines by adding the weigh mechanisms used in the Brewster machines "to obtain more accurate dispensing of the feed additives." *Id.*

Concerning the secondary indicia of nonobviousness, the district court found that there was no convincing evidence that any were present in this case. The court found the fact that Lextron's engineers had been working on a weight-based dispensing system in 1984-85 suggested that the concepts employed by the '971 patent would have been obvious to those skilled in the art. Regarding a long felt need for the invention, the district court noted that "Brewster contributed the key element: an *accurate* weight based feed additive weigh machine, before Mr. Pratt conceived the alleged invention," (emphasis added) and therefore there was no longer a problem to be solved. *Id.* at 1404. The court further noted that the evidence of commercial success was, at best, problematic because Micro Chemical had not sold a single machine, but rather had given them away to the feedlot customers for free. Based on the above-described factual findings, the court found all claims of the '971 patent invalid for obviousness. *Id.*

Concerning the on-sale bar, the district court found, based on Mr. Pratt's own handwritten notes, that he had personally offered a weigh machine to the Sunbelt Feedlot on December 26, 1984. Although Mr. Pratt attempted at trial to explain that his notations did not mean what they appeared to say, the district court unequivocally rejected Mr. Pratt's explanation as unbelievable. *Id.* at 1393.

As to the question of whether the invention had been sufficiently developed to have been offered for sale at the

time of Mr. Pratt's discussions with his customer, the court reviewed extensively Mr. Pratt's development efforts. The district court found that, by the time of Mr. Pratt's offer to Mr. Isaac, he had already constructed three prototype machines and was working on a fourth prototype, which was completed and first operated on January 12, 1985. In an interrogatory response, Micro Chemical described the operation of the January 12, 1985 prototype as being the reduction to practice of the patented invention. Based upon the evidence regarding the previously constructed prototypes and Mr. Pratt's notes and drawings dated in December, 1984, the court found that most of the isolation means had already been developed and that "Pratt also began constructing his mix tank and slurry delivery system in December." *Id.* at 1394. The district court held that Lextron had proven by clear and convincing evidence that Mr. Pratt's offer of a weigh machine to the Sunbelt Feedlot more than one year prior to the filing of his patent application constituted the type of attempted commercial exploitation that is forbidden by Section 102(b).

The district court rejected Mr. Pratt's extensive testimony through which he attempted to show that his invention was not sufficiently developed to have been on sale at the time of his discussions with Mr. Isaac. The court found that Pratt's subsequent development efforts, while perhaps necessary to "perfect the commercial embodiment of his machine," largely were directed towards elements of the machine *not* covered by the claims of the '971 patent. *Id.* Of particular significance, the court also noted that, while Pratt's subsequent development efforts were largely focused on "*critical* isolation features not present on his January 12, prototype," and formed the basis of his alleged discouragement and lack of confidence that his machine would work for its "intended purpose," the '971 patent contained many claims from which Mr. Pratt had deleted any limitation calling for isolation means or accuracy in the weighing process, i.e. the "mixing" and "cumulative weigh" claims. *Id.* at 1394-95 (emphasis in original).

6. The Federal Circuit Opinion

A divided panel of the Federal Circuit reversed the district court's conclusion that the '971 patent was invalid under Section 102(b). Apparently accepting the testimony of Mr. Pratt that had been rejected expressly by the district court, the Court of Appeals found that the invention of the '971 patent "was thus not close to completion and Pratt was not confident at that time [of his offer to the Sunbelt Feedlot] that the invention would work for its intended purpose." 103 F.3d at 1545. Unlike the district court, the Federal Circuit did not refer to the many claims of the '971 patent that contained no limitations relating to isolation means or accuracy and did not separately analyze whether the broader "mixing" and "cumulative weigh" claims were invalid, even if the isolation claims were not.

Judge Mayer dissented from the majority on the on-sale bar issue and criticized the majority for basing its reversal on "the secret, subjective and self-interested beliefs of an inventor" which had been rejected by the district court. *Id.* at 1554. Judge Mayer alluded to the district courts' findings that Mr. Pratt was not a credible witness, noting that such "credibility determinations . . . are virtually unreviewable by this court." *Id.* Judge Mayer correctly noted that the majority had not paid sufficient deference to the district court's factual findings.

In reversing the district's court judgment on the issue of obviousness, the Federal Circuit determined that there was:

> . . . no evidence of a motivation or suggestion to combine the Brewster weigh machine with the Lextron volume machines. In fact, one skilled in the art would not have been motivated to combine the Brewster machine with the volume machines, because the vigorous motion of the mixing elements in the volume machines would have been expected to cause inaccurate weighing. The prior art therefore led away from the idea of combining the features of Brewster with the features of the volume machines. Pratt's inventions solved that problem by

> going against the prior art and successfully combining accurate weighing with accurate delivery of micro-ingredients. Pratt was able to combine the features of weighing and positive intermixing only because he added isolation means to achieve consistently accurate weighing in an environment subject to vibrations from mixing equipment. *Id.* at 1546-47.

The Federal Circuit ignored the finding of the district court that the Brewster weigh machines had all of the "isolators" disclosed in the '971 patent and, therefore, erroneously found that the allegedly vigorous motion of the mixing elements in the volume machines would have been expected to make the Brewster machines inaccurate. Based on this incorrect premise, the Federal Circuit further found that no suggestion was present to combine the mechanical mixer of the Lextron volume machine with the weigh mechanism of Brewster's machine. The facts as found by the district court concerning the prior art, the differences between the prior art and the various claimed inventions and the level of knowledge of persons of ordinary skill in the art of batch weighing systems were not discussed at all and not found to be clearly erroneous. Those facts directly contradict the "facts" upon which the Federal Circuit based its decision on obviousness.

The Federal Circuit's statement that "one skilled in the art would have no reasonable expectation of success in combining the prior art machines in question," *Id.* at 1547, is a finding of fact made *de novo* by the Federal Circuit, which is unsupported by any citation to the record and directly contradicts the evidence relied upon by the district court. The Federal Circuit apparently based its finding on Mr. Pratt's self-serving testimony about his alleged uncertainty of success regarding his own development efforts that the district court had expressly rejected. In fact, the district court pointedly noted that Mr. Pratt was *not* a credible witness.

REASONS FOR GRANTING THE WRIT OF CERTIORARI

This Court has frequently granted certiorari for the purpose of explicating the correct standard of deferential appellate review of factual findings made by trial courts, juries, and administrative agencies. *See e.g.*, *Anderson*; *Dennison Mfg.*; *Icicle Seafoods*; *Amadeo* v. *Zant*, 486 U.S. 214, 223 (1988); *Inwood Laboratories, Inc.* v. *Ives Laboratories, Inc.*, 456 U.S. 844, 857-858 (1982); *Universal Camera Corp.* v. *N.L.R.B.*, 340 U.S. 474 (1951). Indeed, the number of opinions on this issue demonstrate both its importance and this Court's awareness of the need to remind courts of appeal periodically of the sound jurisprudential reasons underlying the deference that Congress and this Court *require* be paid to factual findings made at the trial level in an adversarial proceeding.

The decision of the Federal Circuit in this case warrants review by this Court because it plainly conflicts with several decisions of this Court as well as numerous of its own decisions regarding the appropriate standard of review of factual findings entered by the trial court. Following this Court's decision in the *Dennison Mfg.* case, the judges of the Federal Circuit consistently applied the deferential standard required by Fed.R.Civ.P. 52 and this Court to the findings of fact entered by a trial court or jury. In recent years, however, an increasing number of judges on the Federal Circuit have demonstrated a willingness to substitute their own judgment for that of the trial court or jury regarding the weight and significance of the evidence introduced at trial. This is evidenced in a number of relatively recent decisions in which one judge dissented from the majority opinion and criticized it based upon the majority's disregard for the deference to which findings of fact by the trial court or jury are entitled.

For example, in *Hughes Aircraft Co.* v. *United States*, 86 F.3d 1566 (Fed. Cir. 1996), *vacated and remanded*, 65 U.S.L.W. 3711 (U.S. 1997), Judge Nies criticized the major-

ity for having "essentially performed a *de novo* review of the facts and law" and stated "the majority's freewheeling 'review' was not in accord with the appellate standards now followed by this Court." 86 F.3d at 1583 (Nies, J., dissenting). In *Therma-Tru Corp.* v. *Peachtree Doors, Inc.*, 44 F.3d 988 (Fed. Cir. 1995), Judge Mayer dissented from the reversal of the district court's finding that inequitable conduct had been committed, pointing out that the evidence of record was clearly sufficient to preclude a finding that the trial court had committed clear error on the factual issues of materiality of the withheld references and intent, citing this Court's decision in *Anderson*. *See* 44 F.3d at 997 -998 (Mayer, J., dissenting-in-part).

Similarly, in two trademark cases, *Conopco, Inc.* v. *May Dept. Stores Co.*, 46 F.3d 1556 (Fed. Cir. 1994) and *L.A. Gear, Inc.* v. *Thom McAn Shoe Co.*, 988 F.2d 1117 (Fed. Cir.), *cert. denied*, 510 U.S. 908 (1993), Judge Mayer dissented from the majority's reversal of the lower court's finding that a likelihood of confusion existed between the trademarks in issue, noting in *L.A. Gear, Inc.*, "it is apparent that the only way to come to any other conclusion is for this court to reweigh the evidence that was before the trial court, and to substitute its 'hunch' for the district court's judgment. . ." *L.A. Gear, Inc.*, 988 F.2d at 1135 (Mayer, J., dissenting-in-part). In *Conopco, Inc.*, Judge Mayer stated:

> this court's contrary conclusion on likelihood of confusion is reached by impermissibly reweighing the evidence. That was not only beyond its competence but intrudes on the fact finding role of the district court and encourages litigants to ignore the outcome of the trial and retry the case on appeal.

46 F.3d at 1572 (Mayer, Jr., dissenting-in-part).

Most recently, four judges of the Federal Circuit filed dissenting opinions from the court's refusal to rehear *en banc* the case of *Lough* v. *Brunswick Corp.*, 103 F.3d 1517 (Fed. Cir.

1997).[1] Judges Newman, Plager, Michel and Rader each filed dissenting opinions in which "the issue is whether we have authority to reweigh and reevaluate and rebalance the evidence, with no deference to the procedures and judgment at trial." 103 F.3d at 1520 (Newman, J., dissenting.) Judge Plager articulated his reasons for dissenting as follows:

> However, when invoked as an appellate standard of review, "totality of the circumstances" becomes simply a thin veil behind which Appellate Judges substitute their view of the facts for that of the fact finder. As such, it has the propensity to be arbitrary, capricious, and an invitation to standardless decision making, the sort of thing that Appellate Courts are supposed to correct, not employ.

103 F.3d at 1525 (Plager, J., dissenting). Judge Michel in his dissenting opinion stated:

> I had hoped that in this appeal our court *en banc* might have settled these questions regarding judicial review of jury verdicts on the public use bar, if not legal invalidity issues generically. That occasion is not to arise in the present appeal. I hope our court will soon be presented with such occasion in another appeal. Everyone affected by the patent system stands to gain.

103 F.3d at 1528 (Michel, J., dissenting). Judge Rader, who joined in the dissents of Judges Newman and Plager, stated:

> The *Lough* court, however, reweighed these findings as "questions of law" and chose to find in its own peculiar "totality of circumstances" a bar. Without a more rule-based standard for assessing the facts, and with Appellate Courts reassessing the facts without deference,

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[1] Petitioner notes that the plaintiff in *Lough* has filed a petition for a writ of certiorari raising similar issues to those raised in this petition regarding the Federal Circuit's failure to apply the correct standard of review to lower court's and jury's factual findings. Petitioner believes that this Court should grant both this petition and that in the *Lough* case and consider them together.

> predictability and certainty will remain barred from Section 102(b) jurisprudence.

103 F.3d at 1538 (Rader, J., dissenting).

This Court should issue the Writ of Certiorari in this case because the Federal Circuit's reversal of the trial court is based on a total disregard of the requirements of Fed. R. Civ. P. 52(a) as interpreted by this Court in the *Anderson*, *Dennison Mfg.* and *Icicle Seafood* cases. As noted by Judge Mayer in his dissenting opinion, although the stage of development of Mr. Pratt's weigh machine at the time of his offer to the Sunbelt Feedlot was hotly disputed both at trial and on appeal, the factual findings of the district court were not clearly erroneous and the majority of the panel of the Federal Circuit did not so find them. Judge Mayer noted that the same evidence and arguments made by Micro Chemical to the Federal Circuit had been made to the district court which had "considered and rejected them during a trial of more than two weeks during which it made credibility determinations that are virtually unreviewable by this Court." 103 F.3d at 1547.

The Federal Circuit committed the same type of error in overruling the district court's holding that the '971 patent was invalid for obviousness. Without criticizing or commenting on the district court's findings of fact, the Federal Circuit based its opinion that the '971 patent was not invalid on its own factual findings concerning, *inter alia*, the nature of Brewster's machine and the knowledge of a person of ordinary skill, that directly contradicted those of the district court. Moreover, the Federal Circuit supported its decision with additional *de novo* findings of fact that were largely based upon the unsupported testimony of Mr. Pratt, who the district court had characterized as an untrustworthy witness.

Finally, in remanding certain "nonisolation" claims to the district court to enter findings only on infringement, the Federal Circuit neglected to separately consider the validity of those claims, which plainly were broader than the "isolation"

claims that had been the focus of the Federal Circuit's obviousness analysis. Since the Federal Circuit focused almost entirely on the "isolation" and "accuracy" features in its analysis of the § 102(b) and § 103 issues, the rationale stated for finding the narrow "isolation" claims valid not only cannot be applied to the broader "cumulative weigh" and "mixing claims," but actually supports the conclusion that the district court correctly found those claims to be invalid.

This Court has often noted that the manner in which the validity of patents is determined is an issue of great "public importance." *See e.g. Cardinal Chemical* v. *Morton Int'l*, 508 U.S. 100 (1993); *Blonder-Tongue Laboratories, Inc.* v. *University of Illinois Foundation*, 402 U.S. 313, 331 n. 21 (1971). As this Court stated in *Dow Chemical Co.* v. *Halliburton Co.*, 324 U.S. 320, 328 (1945); "Patent monopolies, with all *their significant economic and social consequences*, are not reserved for those who contribute so insubstantially to that fund of public knowledge." (Emphasis added).

In this case, the district court heard testimony and received evidence for two weeks which convinced it that the patented inventions in issue were obvious. Indeed, it was undisputed at trial that Mr. Pratt had created nothing new in either weighing technology, dispensing technology or mixing technology. All Mr. Pratt claimed to have done was to have combined standard components into a new arrangement. As this Court stated in *Sakraida* v. *AG Pro, Inc.*, 425 U.S. 273, 282 (1976), in reversing a court of appeals and reinstating the trial court's judgment that the patent was invalid for obviousness, "this patent simply arranges old elements with each performing the same function it had been known to perform . . . Such combinations are not patentable." This statement applies equally to the '971 patent.

When, as in this case, the Court of Appeals supplants the district court as the trier-of-fact and reaches contrary conclusions on virtually all of the factual issues underlying the questions of the validity of the patent under Sections 102(b)

and 103, it is clear that the justice system has broken down. When the result of this breakdown is that a patent held invalid on two separate grounds is revived and validated by the Federal Circuit, society as a whole pays the price. As this Court noted in *Great A&P Tea Co.* v. *Supermarket Equipment Co.*, 340 U.S. 147, 155 (1950):

> Such an indiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention. It creates a class of speculative schemers who make it their business to watch the advancing wave of improvement, and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the art.

This Court should grant the petition for certiorari, not only to redress the damage to the defendants and the public resulting from the incorrect judgment that the '971 patent is valid, but more importantly, to remind the Federal Circuit (and all other appellate tribunals) to adhere to the proper standard of review of findings of fact made after a full trial that is required by our system of justice.

ARGUMENT

I. THE REVERSAL BY THE FEDERAL CIRCUIT OF THE DISTRICT COURT'S FINDING THAT THE '971 PATENT WAS INVALID WAS BASED UPON AN IMPROPER REWEIGHING OF EVIDENCE TO REACH FACTUAL FINDINGS CONTRARY TO THOSE OF THE DISTRICT COURT WHICH HAD NOT BEEN FOUND TO BE CLEARLY ERRONEOUS AND, THEREFORE, VIOLATED FED.R.CIV.P. 52(a)

A. The On-Sale Bar Issue

The determination that a product was placed on sale under § 102(b) is a question of law, based on underlying facts. *See*

Keystone Retaining Walls Systems, Inc. v. *Westrock, Inc.*, 997 F.2d 1444 (Fed. Cir. 1993). In reaching its conclusion, the court must consider the totality of the circumstances, bearing in mind that the primary policy governing the application of Section 102(b) is to prevent commercial exploitation by the patentee of his invention outside of the one year grace period authorized by Congress. *See Bonito Boats, Inc.* v. *Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-151 (1989); *Envirotech Corp.* v. *Westech Engineering, Inc.*, 904 F.2d 1571, 1574 (Fed. Cir. 1990); *King Instruments Corp.* v. *Otari Corp.*, 767 F.2d 853, 860 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1016 (1986). Congress has forbidden any attempted commercialization of the invention outside of the one year grace period provided by Section 102(b) as a *de facto* extension of the monopoly provided by the patent laws for the exclusive exploitation of a patented invention.

In keeping with these principles, courts have rigorously enforced the one-year grace period, holding that a single offer of the patented invention prior to the critical date, whether accepted or not, will constitute a bar to patentability. *See RCA Corp.* v. *Data General Corp.*, 887 F.2d 1056, 1062 (Fed. Cir. 1989); *Buildex, Inc.* v. *Kason Industries, Inc.*, 849 F.2d 1461, 1464, (Fed. Cir. 1988). The Federal Circuit also has held that there is no requirement that the patented invention be reduced to practice in order for an offer of sale to invalidate the patent, *see U.M.C. Electronics Co.* v. *United States*, 816 F.2d 647, 656, (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1025 (1988), that there is no requirement that the product actually be on hand at the time of the offer and that it is immaterial that the device was only makeshift and was not commercially marketable at the time of the offer in order to result in a statutory bar. *See Barmag Barmer Maschinenfabrik Ag.* v. *Murata Machinery, Ltd.*, 731 F.2d 831, 836, 838 (Fed.Cir. 1984); *American Sun Roof Corp.* v. *Cars & Concepts, Inc.*, 660 F. Supp. 1, 3-4 (E.D.Mich. 1984), *aff'd*, 776 F.2d 1064 (Fed. Cir. 1985).

In this case, there is no dispute that Pratt offered a micro-ingredient weigh machine to one of his feedlot customers on December 26, 1984, more than one year prior to the date on which he filed his application for the '971 patent on February 26, 1986. The district court so found based upon Mr. Pratt's own handwritten notes that were confirmed by the deposition testimony of the customer to whom the weigh machine had been offered. Although Mr. Pratt testified extensively in an attempt to convince the Court that no such offer had been made, the district court expressly rejected Mr. Pratt's testimony, finding him not to be a credible witness.

Once it is accepted that Mr. Pratt offered a weigh machine to his customer, the only remaining inquiry is whether what was offered to the customer either anticipated or rendered obvious the patented invention. In answering this question, the customer's knowledge of what was offered to him is irrelevant. *See Ferag AG* v. *Quipp, Inc.*, 45 F.3d 1562, 1568 (Fed. Cir.), *cert. denied*, 116 S. Ct. 71 (1995); *RCA Corp.*; 887 F.2d at 1060; *King Instrument Corp.*, 767 F.2d at 860. That the inventor continued to add improvements to his invention after its attempted commercialization likewise does not avoid the on-sale bar. *See Seal-Flex, Inc.* v. *Athletic Track & Core Construct.*, 98 F.3d 1318, 1324 (Fed. Cir. 1996).

The district court entered extensive findings of fact regarding the status of Mr. Pratt's invention at the time of his offer of a weigh machine to the Sunbelt Feedlot. Based on those findings, the district court concluded that Mr. Pratt had sufficiently completed his invention at the time of his offer to the Sunbelt Feedlot to trigger an on-sale bar.

In reaching its conclusion, the district court refused to accept Mr. Pratt's extensive testimony that, at the time of his offer to Sunbelt and for a considerable time thereafter, he was unsure that his weigh machine would "work for its intended purpose." Beyond its general criticisms of Mr. Pratt's credibility, the Court noted that "Mr. Pratt's subjective expressions that he was still experimenting on his invention after January

12, 1985 are entitled to little weight since they were expressed for the first time at trial" and because they contradicted Micro Chemical's initial interrogatory responses. *Micro Chemical*, 900 F. Supp. at 1406, citing, *Western Marine Electronics* v. *Furuno Electric Co.*, 764 F.2d 840, 842 (Fed. Cir. 1985); *In re Brigance*, 792 F.2d 1103, 1108 (Fed. Cir. 1986).

The district court also noted that Mr. Pratt's alleged subsequent development efforts all related either to "critical" isolation features or to other features not covered by any claims of the '971 patent. This comment is particularly important in this case, as the Federal Circuit focused almost entirely on Mr. Pratt's efforts to achieve adequate isolation to achieve accuracy in his subsequent development efforts and did not even mention that *none* of the claims remanded to the district court for findings on infringement contain any limitations relating to isolation means or achieving accuracy in the weighing of microingredients.

The facts in this case are similar to those in the *UMC* case that the Federal Circuit held *would* support an on-sale bar, i.e.:

> prior art devices embody each element of the claimed invention, save one, and that portion was available and had been sufficiently tested to demonstrate to the satisfaction of the inventor that the invention as ultimately claimed would work for its intended purpose.

UMC, 816 F.2d at 657. Every part of Mr. Pratt's patented invention, including the weighing system, the microingredient dispensing systems, the mixing and slurry delivery systems, were all standard items that were readily obtainable and had been used for the exact same purpose in other prior art microingredient machines for many years.

"Where there are two permissible views of the evidence, the fact finder's choice between them cannot be clearly erroneous." *Anderson*, 470 U.S. at 574. The Federal Circuit, however, ignored this long-established rule, and based its reversal

of the trial court on the unsupported testimony of Mr. Pratt that had been rejected by the district court. This procedure by the Federal Circuit was directly contrary to that laid out in *Anderson*, wherein this Court stated:

> but when a trial judge's finding is based on his decision to credit the testimony of one or two or more witnesses, each of whom has told a coherent and facially plausible story that is not contradicted by extrinsic evidence, that finding, if not internally inconsistent, can virtually never be clear error.

Anderson, 470 U.S. at 575.

The Federal Circuit made no comments at all regarding the findings of fact entered by the district court. Rather, it simply reweighed the evidence to reach different factual conclusions which it held compelled a finding that the on-sale bar did not apply. Such a procedure plainly violates this Court's mandate in *Dennison Mfg.*, that the Federal Circuit must "explicitly apply the clearly erroneous standard to any of the district court's findings." *Dennison Mfg.*, 475 U.S. at 811.

The Federal Circuit grounded its reversal of the district court's judgment on its own factual findings, based on its acceptance of Mr. Pratt's self-serving testimony, that his "invention" was not sufficiently developed at the time of his offer of a weigh machine to the Sunbelt Feedlot to trigger the on-sale bar. The decision of the Federal Circuit, therefore, is premised upon a fundamental disregard for the principles of appellate review set forth by this Court in the *Dennison Mfg.* and *Anderson* cases and should be reversed.

B. The Obviousness Issue

Whether a patented invention is obvious is a question of law based upon underlying factual questions. *See Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The factual questions relate to the scope and content of the prior art; the differences between the prior art and the patented invention claimed; the

knowledge of one of ordinary skill in the art; and any objective evidence which may be present as indicia of non-obviousness. *See Id.*; *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 716 (Fed. Cir. 1991). In this case, the district court made express findings regarding the scope and content of the prior art that it deemed most significant, the Brewster weigh machines and the Lextron volume machines. The district court also specifically noted the differences between those prior art systems and the claimed inventions and then commented on the knowledge that would be readily at hand to one of ordinary skill in the art. Finally, the district court discussed secondary indicia of nonobviousness and found that none were present in this case.

The Federal Circuit did not find any of the district court's findings of fact to have been clearly erroneous. In fact, the Federal Circuit did not discuss at all any of the district court's findings of fact. Rather, without citation to any evidence in the record, the Federal Circuit simply entered its own findings of fact regarding the structure and function of the Brewster weigh machine, which contradicted both the district court's express findings and the evidence introduced at trial.

The Federal Circuit based its reversal of the district court's holding on obviousness on its finding that there was no suggestion in the prior art to add a mixer to the Brewster weigh machines and that, in fact, "the prior art therefore led away from the idea of combining the features of Brewster with the features of the volume machines." *Micro Chemical*, 103 F.3d at 1546. Whether a reference teaches away from the claimed invention, however, is a question of fact. *See Para-Ordinance Mfg., Inc.* v. *SGS Importers, Int'l, Inc.* 73 F.3d 1085, 1088 (Fed. Cir. 1995), *cert. denied*, 117 S.Ct. 80 (1996); *In re Bell*, 991 F.2d 781, 784 (Fed. Cir. 1983). The Federal Circuit should not have decided this issue *de novo*. *See Loctite Corp.* v. *Ultraseal, Ltd.*, 781 F.2d 861, 875 (Fed. Cir. 1985).

The Federal Circuit has stated that the suggestion to combine features from two or more references may come from the

knowledge of one skilled in the art, the nature of the problem to be solved or the very nature of the subject matter involved. *See Pro-Mold & Tool Co.* v. *Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996). In its explanation of why it would have been obvious to add a mixer to the Brewster weigh machines, the district court found that:

> one having ordinary skill in the batch weigh system art would have been well aware of the option of employing a mechanical mixer in order to obtain a more thorough blending of the feed additives and the water carrier prior to discharge.

Micro Chemical, 900 F. Supp. at 1403.

The district court apparently found the suggestion to add a mixer to the Brewster machines based on all three of the sources referred to by the Federal Circuit in *Pro-Mold*. The pertinent art in question is batch weigh systems. Such systems are designed to create mixtures of measured amounts of different materials. By their very nature, such systems usually include some type of mixing element.

The district court's finding also clearly alludes to the nature of the problem to be solved as supplying the suggestion to add a mechanical mixer to Brewster. If a person believed that the Brewster machines could not provide an "accurate delivery of micro-ingredients" (a "fact" neither found by the district court nor supported by the record), the obvious solution to that "problem" would be to employ a mechanical mixer such as was used in the Lextron volume machines.

Whether Brewster's machines were accurate and had isolation means that worked was a hotly contested issue at trial. In reaching its conclusions regarding the scope and content of Brewster's weigh machines, the district court necessarily found the testimony of Mr. Brewster and Lextron's other witnesses to be more credible than the testimony of Mr. Pratt and plaintiff's other witnesses. As previously noted, the district court expressly found that the *only* differences between the

Brewster weigh machines and those claimed in the '971 patent were that Brewster did not employ a mechanical mixer to create a slurry and did not utilize cumulative weighing. This finding implicitly holds that Brewster *did* include the isolation means necessary to achieve accurate weighing. The Federal Circuit was not at liberty to disregard the district court's findings regarding the Brewster machines unless it believed that they were clearly erroneous which, given the extensive evidence in the record to support them, was simply not possible under the teachings of *Anderson*.

The Federal Circuit based its holding that "the record contains no evidence of a motivation or suggestion to combine the Brewster weighing machine with the Lextron volume machines," 103 F.3d at 1546, on its factual finding that:

> one skilled in the art would not have been motivated to combine the Brewster Machines with the Volume machines, because the vigorous motion of the mixing elements and the volume machines would have been expected to cause inaccurate weighing.

This finding is pure speculation that could have been based only on Micro Chemical's arguments and testimony that were rejected by the district court. It ignores that, in creating its weigh machine, all Lextron did was to add a weighing mechanism to its volume machine, which never resulted in the problems relating to vibrations that the Federal Circuit stated inherently would preclude such a combination. The Federal Circuit's conclusion directly contradicts the findings entered by the district court and the evidence of record.

The district court expressly refused to give Mr. Pratt credit for having invented the concept of isolation. *Micro Chemical*, *see* 900 F. Supp. at 1408. Nonetheless, the Federal Circuit appears to have done precisely that, stating:

> Pratt was able to combine the features of weighing and positive intermixing *only* because he added isolation

means to achieve consistently accurate weighing in an environment subject to vibrations from mixing equipment." *Id.* at 1547 (emphasis added).

The testimony at trial demonstrated that the concept of isolation was old in the batch weighing system art and routinely employed by any person designing a weighing system in a harsh environment.

The Federal Circuit apparently further found that there was a "long-felt need" for the patented invention based upon "Pratt's extensive efforts to solve the problem of isolating the weighing system." *Id.* Unlike *In Re Dow Chemical Corp.* 837 F.2d 469, 473 (Fed. Cir. 1973) (Fed. Cir. 1988), cited by the Federal Circuit in support of its finding, Mr. Pratt did not labor for "five to six years of research that proceeded the claimed invention." Rather, Mr. Pratt completed his invention from conception to reduction to practice in less than one year. Far from supporting its conclusion of nonobviousness, this "fact," found *de novo* by the Federal Circuit, actually suggests the obviousness of those "inventions" covered by the "isolation" claims of the '971 patent. The Federal Circuit's finding of a long felt need also contradicts the express finding of the district court that Brewster had invented an accurate, weight-based feed additive dispensing machine before Mr. Pratt conceived his invention and that "once another supplied the key element. . .there was no longer a problem to be solved. *Newell Cos.* v. *Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1989); *Calmar Inc.* v. *Cook Chemical Co.*. 383 U.S. 1, 36 (1966)." *Micro Chemical*, 900 F. Supp. at 1404. The Federal Circuit did not comment on the absence of other secondary indicia of nonobviousness that had been found by the district court.

If the Federal Circuit felt that the district court had failed to make sufficient findings of fact to enable it to determine whether the inventions claimed would have been obvious, it should have remanded the case to the district court to make

the necessary findings. *See Custom Accessories, Inc.* v. *Jeffrey-Allen Industries, Inc.*, 807 F.2d 955, 963 (Fed. Cir. 1986), quoting, *Icicle Seafoods, Inc.* v. *Worthington*, 475 U.S. 709, 714 (1986). Instead, the Federal Circuit simply found certain facts itself, ignoring the mass of evidence and testimony that contradicted its findings but had been sufficient to convince the district court that all claims of the '971 patent were invalid. The Federal Circuit ignored the oft-stated principles that an appellate court cannot make *de novo* findings of fact relating to the issue of obviousness. *See e.g.*, *Loctite Corp.*, 781 F.2d at 875.

To reverse a district court's judgment that a patent is invalid for obviousness, this Court requires the Federal Circuit to "explicitly apply the clearly erroneous standard to any of the district court's findings on obviousness" or explain why "Rule 52(a) had no applicability to this issue." *Dennison Mfg.*, 475 U.S. at 811. As the Federal Circuit stated in the *Dennison Mfg.* case following the remand by this Court:

> When a district court has admitted evidence and made findings establishing non-obviousness, disregard of their legal impact is a jurisprudentially improper approach gravely damaging the concepts of fair trial and principled decision-making under the statutes, Sections 103, 282.

Panduit Corp. v. *Dennison Mfg. Co.*, 810 F.2d 1561, 1571 (Fed. Cir.), *cert. denied*, 481 U.S. 1052 (1987). In this case, the district court made specific findings regarding the scope and content of the prior art, the differences between the patented invention and the prior art, the knowledge of one of ordinary skill in the art and the absence of secondary indicia of nonobviousness. These findings were supported by the evidence of record. Where a court makes findings based on its view of the evidence, such findings cannot be found to be clearly erroneous, even if the court of appeals would have weighed the evidence differently. *See Anderson*, 470 U.S. at 574.

As this Court has stated, the patent laws express a Congressional determination that the creation of a monopoly in information that is already available to the public would "not only serve no socially useful purpose, but would in fact injure the public by removing existing knowledge from public use." *Bonito Boats*, 489 U.S. at 148. It is uncontested that Mr. Pratt made no contribution whatsoever in the art of weighing or in the art of mixing ingredients to create a slurry. All that Mr. Pratt has contended that he did was to be the first to combine well-known prior art components by using a scale together with a mechanical mixer in the same microingredient machine. As with the combination patent held to be invalid for obviousness in *Sakraida*, 425 U.S. at 282, Mr. Pratt's alleged invention "adds nothing to the sum of useful knowledge where there is no change in the respective functions of the elements of the combination. . ." The Federal Circuit in this case has, in essence, held that using a propeller to mix ingredients in a weigh machine is a patentable invention. Such an insubstantial contribution to the public fund of knowledge simply cannot qualify for patent protection under the long established precedents of this Court. *See Great A&P Tea Co.* v. *Supermarket Equipment Co.*, 340 U.S. at 155.

II. IN REVERSING THE DISTRICT COURT'S FINDING THAT ALL CLAIMS OF THE '971 PATENT WERE INVALID, THE FEDERAL CIRCUIT ERRED IN FAILING TO HAVE SEPARATELY ANALYZED THE BROADER CLAIMS OF THE PATENT THAT CONTAIN NO LIMITATIONS REQUIRING ACCURACY IN WEIGHING OR PROVIDING FOR ISOLATION MEANS TO ACHIEVE SUCH ACCURACY

35 U.S.C. § 282 states that: "Each claim of a patent . . . shall be presumed valid independently of the validity of the other claims . . ." As the Federal Circuit stated in *Lemelson* v. *TRW, Inc.*, 760 F.2d 1254 (Fed. Cir. 1985):

> It would be improper, however, in evaluating validity to view each patent in suit as an indivisible unit by looking

> to a purported invention of each. Rather, the scope of each individual claim must be examined on its own merits, apart from that of other claims, even in the same patent.

Lemelson, 760 F.2d at 1267.

The district court expressly noted that the asserted claims of the '971 patent could be separated into three groups of varying scopes: "(1) isolation claims; (2) cumulative weigh claims, and (3) mixing claims." *Micro Chemical*, 900 F. Supp. at 1395. Having found that the Brewster machines utilized "isolation" means to achieve accurate weighing, and that using mechanical mixers and cumulative weighing were both well-known in the prior art, the district court found that all of the asserted claims of the '971 patent were invalid for obviousness.

In reversing the findings of the district court that the '971 patent was invalid both under §§ 102(b) and 103, the Federal Circuit focused its discussion solely on the "isolation" claims. Thus, in reversing the district court's finding that the invention of the patent was subject to an on-sale bar, the Federal Circuit focused on Mr. Pratt's subsequent development efforts and his uncertainty that his invention would "work for its intended purpose," which was based entirely on his alleged uncertainty regarding the ability of the isolation means he was then employing to provide sufficient accuracy in the allegedly harsh environment of a cattle feedlot. Although the district court had expressly noted that many of the asserted claims contain no limitation directed towards "isolation means" or accuracy, the Federal Circuit did not separately analyze any of the "non-isolation" claims to determine whether they might have been invalid for having been on-sale. As to the inventions covered by the claims that contain no requirement of accuracy or any means for obtaining accurate weighing, however, Mr. Pratt could not have doubted that his weigh machine would have accomplished those goals back in December when he offered a weigh machine to his customer.

The Federal Circuit committed the same error in reversing the district court's decision on obviousness. Once again, the Federal Circuit's disagreement with the district court focused solely on the perceived inability of the Brewster machines to have obtained accurate weighing if a mechanical mixer were added to them. As the "non-isolation" claims of the '971 patent have no limitation requiring accurate dispensing of microingredients, however, that argument lends no support to their validity. Similarly, Pratt's allegedly "extensive efforts to solve the problem of isolating the weighing system" have nothing to do with whether the invention covered by the claims without any isolation means would have been obvious in light of Mr. Brewster's weigh machine and the Lextron volume machine. The Federal Circuit never alluded to any problem connected with development of the mixing and slurry delivery systems which, admittedly, had been in use in Lextron's volume machines for many years prior to Mr. Pratt's patent application. Moreover, the Federal Circuit's finding that there was a "long-felt need" for the patented invention clearly has no applicability to any claims of the '971 patent that do not cover an invention capable of providing accurate weighing because they have no isolation means or step.

This Court has noted that "it is the claims of the patent which define the invention" and that "each claim must stand or fall as itself sufficiently defining invention, independently of the others." *Altoona Publix Theatres, Inc.* v. *American Tri-Ergon Corp.*, 294 U.S. 477, 487 (1934). The failure of the Federal Circuit to individually consider whether the broader "non-isolation" claims of the '971 patent might be invalid even if the narrower, "isolation" claims were valid, constitutes clear error. The validity of the "non-isolation" claims does not automatically follow from a finding that the narrower "isolation" claims were not obvious, particularly when Mr. Pratt distinguished virtually all of the prior art references raised during the prosecution of his application on the ground that they lacked isolation means and therefore were inaccurate. In this case, this error is particularly serious as the Fed-

eral Circuit affirmed the finding of the district court that the "isolation" claims were *not* infringed by the Lextron weigh machines, and remanded to the district court for additional findings only the asserted "non-isolation" claims. Even if this Court were to find that the Federal Circuit did not err in reversing the district court's holding that the "isolation" claims were invalid, there simply is no basis whatsoever to uphold the finding of the Federal Circuit that the "non-isolation" claims also were not proven to be invalid.

The failure of the Federal Circuit to separately analyze all of the asserted claims provides an independent basis for this Court to grant the petition for certiorari and to reverse the judgment of the Court of Appeals for the Federal Circuit.

CONCLUSION

A gross injustice has been done to the defendants in this case and to the public at large. By virtue of the Federal Circuit's failure to correctly apply the appellate standard of review mandated by this Court in the *Dennison Mfg.*, *Anderson* and *Icicle Seafoods* cases, the Federal Circuit has so far departed from the accepted and usual course of judicial proceedings that this Court should intervene to provide guidance so that this mistake, which has been made by the Federal Circuit in several cases in the last few years, is not repeated. Moreover, the failure of the Federal Circuit to independently analyze the validity of the specific claims that it remanded to the district court for additional findings on the issue of infringement independently warrants granting the petition for certiorari so that this error can be corrected.

For the above-stated reasons, Lextron respectfully requests that this Court grant its petition for certiorari and on review, reverse the judgment of the Court of Appeals for the Federal Circuit in this case.

Dated: New York, New York
May 30, 1997

Respectfully submitted,

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APPENDIX

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

Nos. 95-1504, -1514
DECIDED: January 3, 1997

MICRO CHEMICAL, INC.,

Plaintiff-Appellant,

—v.—

GREAT PLAINS CHEMICAL CO., INC., LEXTRON, INC., and ROBERT C. HUMMEL,

Defendants-Cross/Appellants.

—and—

WILLIAM PRATT,

Defendant.

Before ARCHER, *Chief Judge*, MAYER and LOURIE, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* LOURIE. Dissenting opinion filed by *Circuit Judge* MAYER.

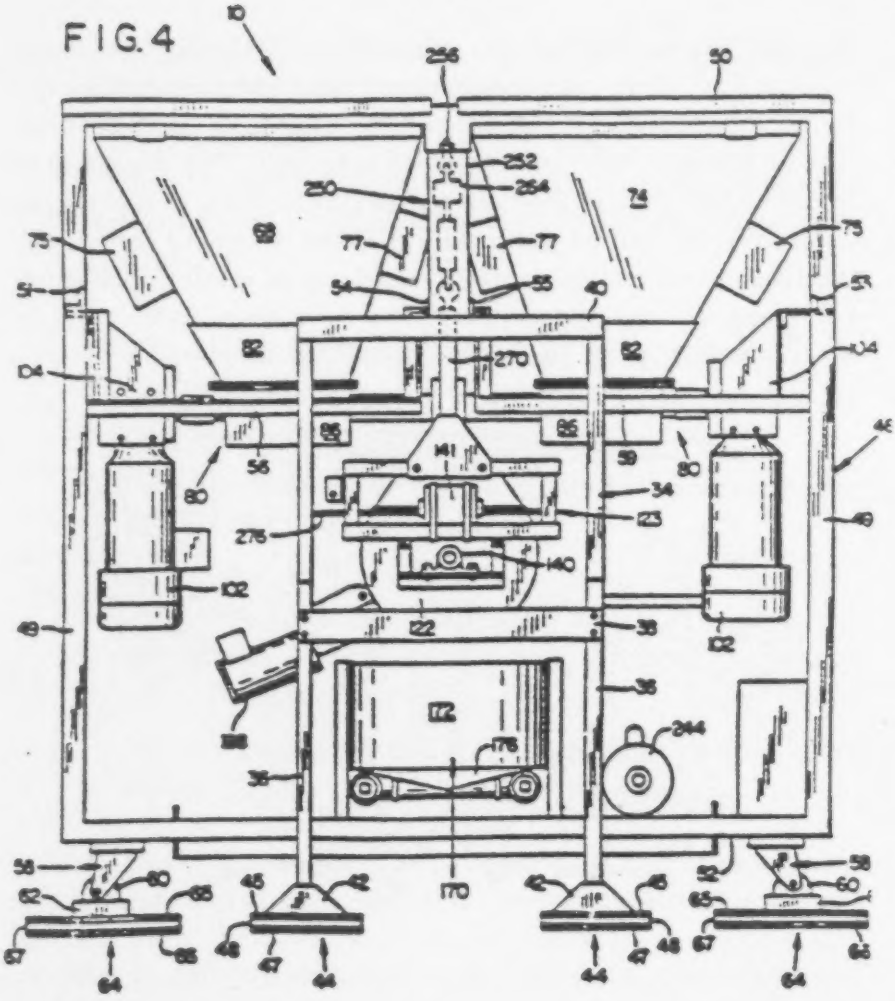
LOURIE, *Circuit Judge*.

Micro Chemical Inc. appeals from the judgment of the United States District Court for the District of Colorado that U.S. Patent 4,733, 971 is invalid and was not infringed by the defendants. *Micro Chem. Inc. v. Great Plains Chem. Co.*, 900 F. Supp. 1386 (D. Colo. 1995). Great Plains Chemical Co., Inc., Lextron, Inc., and Robert C. Hummel (collectively "Lextron") appeal from the district court's judgment that the patent was not obtained by means of inequitable conduct. *Id.* Because the district court erred in concluding that the patent is invalid, but did not err in concluding that certain of the asserted claims were not infringed and that the patent was not obtained by means of inequitable conduct, we affirm-in-part and reverse-in-part. We remand for a determination of infringement of certain asserted claims not addressed by the district court.

BACKGROUND

The '971 patent concerns a method and apparatus for adding small amounts of ingredients ("microingredients") to livestock or poultry feed in order to promote growth and to prevent sickness. Figure 4 of the patent is a front view of the internal parts of the machine (10). The microingredients are stored in bins (68, 74), below which is a weighing hopper (122) supported by a "weigh frame" (34). A mixing vessel (170) is located beneath the weighing hopper and is supported by a separate main frame (46). The machine is controlled by a "weigh microcomputer" and a machine sequencing microcomputer. The patent discloses a block diagram for the computer components and flow charts illustrating software for controlling the operation of the computers and the machine. An operator programs the desired types and amounts of microingredients into the machine, and the computers control the machine in order to weigh microingredients in the weighing hopper, dispense them into the mixing tank, and mix them with a liquid carrier such as water in order to form a slurry to be sprayed onto the feed.

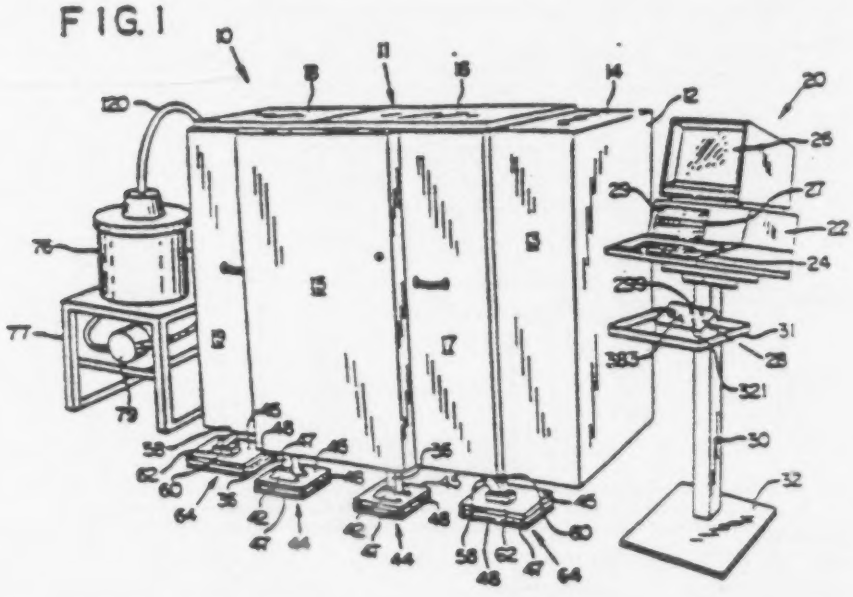
FIG. 4



The machine includes elements for isolating the sensitive equipment of the weighing mechanism from the adverse effects of vibrations or other disturbances that might affect its accuracy. These include isolation pads (44) that dampen vibrations transmitted to the "weigh frame" from the floor on which it is placed. The separate "weigh frame" (34) isolates the weighing equipment from the mixing equipment and other components, which are supported by their own frame (46). The mixing equipment generates substantial vibrations caused by agitation during the mixing process, and use of a separate frame reduces the transfer of those vibrations to the weighing system. An antisway bar (276) dampens transverse motion.

The machine is enclosed by panels (12), which shield its components from dust and other contaminants and also protect the weighing system from external forces such as wind or other jarring contact that may affect its accuracy. The panels (12) are shown in Figure 1 of the patent. According to the specification of the patent, the isolation of the weighing equipment results in consistently accurate weighing of microingredients.

FIG. 1



Claim 1, which recites the isolation feature, reads as follows:

> 1. An apparatus for measuring, dispensing, and delivering microingredient feed additive concentrates in small but accurate amounts in a liquid carrier slurry into a livestock or poultry feed ration shortly before the delivery of said feed ration to the animals for consumption, said apparatus comprising:
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> multiple storage means for storing separately a plurality of different microingredient feed additive concentrates;
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> multiple dispensing means for dispensing separately several additive concentrates from said multiple storage means;

weighing means for determining the weights of said different additive concentrates dispensed;

isolating means for isolating said weighing means from influences affecting the weighing function of said weighing means so accurate weight determinations are obtained;

control means for controlling separately the operation of said plural dispensing means in response to weight determinations of said weighing means to control the weight of additive concentrates dispensed;

receiving means for receiving additive concentrates dispensed from said storage means;

mixing means for mixing a liquid carrier with the additive concentrates dispensed into said receiving means to form a slurry of said carrier and the dispensed additive concentrates; and

delivery means for delivering said slurry to a slurry-receiving station for mixing with a feed ration.

The patent also discloses and claims a method of delivering microingredients using sequential and cumulative weighing. During sequential weighing, the weighing hopper is inverted in order to dump each weighed microingredient into the mixing tank and it is then reverted to receive and weigh the next microingredient. During cumulative weighing, microingredients are repeatedly dumped on top of one another in the weighing hopper as a computer resets a scale to zero after each microingredient is added to the weighing hopper. Claim 47, which includes the sequential and cumulative weighing feature, reads as follows:

47. A method of dispensing and delivering microingredient feed additives into a livestock feed ration shortly before delivering the feed ration to the livestock for consumption, comprising the steps:

storing separately multiple said additives in concentrate form;

dispensing predetermined weights of selected said additive concentrates into a liquid carrier with no substantial intermixing of the additive concentrates before they enter the liquid carrier;

intermixing the additive concentrates in the liquid carrier to dilute, disperse, and suspend them and form a liquid carrier-additive slurry;

directing the slurry to a receiving station while maintaining the suspension and dispersion of the additives until delivered into a feed ration; and

determining the predetermined weights of selected additives by weighing each additive sequentially and cumulatively in a common weighing container while maintaining separation of the different concentrates in said container.

The development of the '971 invention began in 1984 when the inventor, William C. Pratt, conceived the idea of a weighing and delivery system having improved accuracy compared to prior art systems. In December 1984, before the critical date of February 26, 1985,[1] Pratt offered to sell a weighing machine to Lee Isaac, manager of the Sunbelt feedlot located in Hugoton, Kansas. Isaac rejected his offer and instead purchased a machine sold by Lextron. Although Pratt had built and tested a weighing system for the machine allegedly offered at that time, he had not constructed a slurry or mixing system for use with the weighing system. He did have a "rough" sketch of the mixing system.

In January 1985 Pratt constructed a prototype that included both the weighing and the mixing systems. He encountered several problems during testing of this prototype. His primary challenge was in isolating the weighing system from the adverse effects of vibrations caused by the mixing system and

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[1] The '971 patent has a filing date of February 26, 1986 and therefore a critical date of February 26, 1985 for purposes of 35 U.S.C. § 102(b).

by other sources. Because of its sensitivity, the weighing system was liable to provide incorrect measurements as a result of these vibrations. Pratt constructed another prototype in February 1985, but it also did not accurately weigh microingredients consistently. In late February he incorporated additional elements into that prototype in order to achieve adequate isolation of the weighing system. The improved February prototype contained as isolating elements a separate "weigh frame," rubber isolation pads, and longitudinal and lateral stabilizers. He also added a three-speed mixer to the mixing tank to intermix the microingredients with a liquid carrier and he used two RCA computers for controlling operation of the machine. It produced satisfactory results when tested and it was presented to a group of Tulsa bankers on February 28, 1985, after the critical date.

Three days after the patent issued, Micro sued Lextron, Great Plains Chemical Co., Inc., and Robert C. Hummel[2] for infringement.[3] Micro alleged that Lextron infringed the patent by manufacturing and selling microingredient additive machines referred to as "cumulative weigh" and "weigh/dump" machines. Micro also alleged that Lextron induced infringement by providing what it referred to as "no-mix" machines to feedlots owned by Cactus Feeders. Lextron counterclaimed for a declaratory judgment of invalidity and noninfringement.[4] In March 1993, the district court conducted a bench trial of all patent-related issues, having separated out the damages issues.

The district court held that the asserted claims of the patent were invalid under section 102(b), determining that the December 1984 offer to Isaac triggered the on-sale bar.[5] The

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[2] Great Plains Chemical Co., Inc. is Lextron's predecessor company. Robert C. Hummel is the president of Lextron.

[3] Micro asserted infringement of claims 1, 3, 9, 11, 13, 45, 47, 48, 49, 63, 65, 67, 68, 74, 79, 89, 90, 91, 92, 93, and 94.

[4] Lextron counterclaimed against both Micro and its president, Pratt.

[5] "A person shall be entitled to a patent unless . . . the invention was . . . on sale in this country, more than one year prior to the date of

district court held that all the claims of the '971 patent were also invalid under section 103, concluding that the invention would have been obvious to one skilled in the art based on a combination of the features of two prior art microingredient machines. It concluded that Lextron did not directly infringe claims 1, 3, 9, 11, 13, and 45, and did not induce infringement of claims 1, 3, 45, 63, 74, 93, and 94. The district court did not address infringement of the other asserted claims. It also held that Pratt and his representative, James S. Leigh, did not engage in inequitable conduct in the procurement of the patent. Accordingly, the district court entered judgment for Lextron on Micro's complaint and on Lextron's counterclaim for a declaratory judgment of invalidity and noninfringement.

Micro now appeals to this court, challenging the district court's judgment concerning validity and infringement. Lextron cross-appeals, asserting that the district court erred in concluding that no inequitable conduct occurred.

DISCUSSION

On appeal from a bench trial, we review a district court's decision for errors of law and clearly erroneous findings of fact. Fed. R. Civ. P. 52(a); *see Interspiro USA, Inc. v. Figgie Int'l Inc.*, 18 F.3d 927, 930, 30 USPQ2d 1070, 1072 (Fed. Cir. 1994).

A. *The On-Sale Bar*

Micro argues that there was no sale of, or definite offer to sell, the invention prior to the critical date. It asserts that the invention could not have been on sale at the time of the alleged offer to Isaac because the invention did not exist at that time. According to Micro, as of the December date, Pratt had not yet designed anything patentable and the public therefore could not be in possession of his invention.

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the application for patent in the United States. . . ." 35 U.S.C. § 102(b) (1994).

Lextron responds that the offer to Isaac in December 1984 was properly found to constitute an on-sale bar. According to Lextron, Pratt did have an invention to sell to Isaac at that time, insisting that Pratt had already built three prototypes and had reduced the invention to practice approximately two weeks after the offer was made. Furthermore, Lextron argues that, according to our decision in *UMC Elecs. Co. v. United States*, 816 F.2d 647, 2 USPQ2d 1465 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1025 (1988), a prior reduction to practice is not a prerequisite to an on-sale bar and that even before the reduction to practice had occurred, the offer to Isaac constituted a bar.

Application of the on-sale bar under section 102 is a question of law based upon underlying issues of fact. *See Key-Stone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444, 1451, 27 USPQ2d 1297, 1303 (Fed. Cir. 1993); *UMC*, 816 F.2d at 657, 2 USPQ2d at 1472. A determination that an invention was on sale within the meaning of section 102(b) requires that "the claimed invention asserted to be on sale was operable, the complete invention claimed was embodied in or obvious in view of the device offered for sale, and the sale or offer was primarily for profit rather than for experimental purposes." *Keystone*, 997 F.2d at 1451, 27 USPQ2d at 1303. In *UMC*, we stated that a reduction to practice of the claimed invention is not a prerequisite for triggering the on-sale bar. *UMC*, 816 F.2d at 656, 2 USPQ2d at 1471. Rather, "[a]ll of the circumstances surrounding the sale or offer to sell, including the stage of development of the invention and the nature of the invention, must be considered and weighed against the policies underlying section 102(b)." *Id.* 2 USPQ2d at 1471-72.

We agree with Micro that the invention of the patent was not offered for sale before the critical date within the meaning of section 102(b). The evidence compels a conclusion that Pratt's invention was clearly not completed when he made the December offer. At the time of the alleged offer, Pratt had developed a prototype for the weighing system; however, he

had only made a sketch of the mixing system and had not yet designed the elements for isolating the weighing system. The invention was thus not close to completion and Pratt was not confident at that time that the invention would work for its intended purpose. Pratt testified that, as of December 28, 1984, "[t]here had been no construction of the mixing tank or the slurry system portion of the machine at that time." He stated that what he had at that time was a proposed configuration. At the time of the alleged offer to Isaac, Pratt had not reduced the invention to practice, nor had he substantially completed the invention. Because Pratt was not close to completion of the invention at the time of the alleged offer and had not demonstrated a high likelihood that the invention would work for its intended purpose upon completion, his December 1984 "offer" could not trigger the on-sale bar.

In the *UMC* case, we held a patent invalid on the basis of an on-sale bar, even though the invention had not been reduced to practice. Although Lextron argues here that *UMC* requires that we affirm the invalidity of Micro's patent, we do not agree. The invention in *UMC* was an aviation counting accelerometer ("ACA"), which was used in aircraft for sensing and determining how many times the aircraft had been subjected to predetermined levels of acceleration. ACAs had previously used electro-mechanical sensors, which generated a mechanical signal to indicate levels of acceleration, and at times produced an erroneous signal as a result of mechanical vibrations or stresses. The new ACA used an analog transducer, which produced an electrical signal that could be filtered to remove the adverse effects of mechanical vibrations. UMC made a definite offer to sell the new ACA before the critical date of the patent-in-suit. At the time of the offer, the new ACA was substantially complete. The court stated that the "prior art devices embodied each element of the claimed invention, save one, and that portion was available and had been sufficiently tested to demonstrate to the satisfaction of the inventor that the invention as ultimately claimed would work for its intended purpose." *UMC*, 816 F.2d at 657, 2

USPQ2d at 1472. The invention was substantially completed and there was reason for a high degree of confidence that it would work for its intended purpose. *See Seal-Flex, Inc. v. Athletic Track and Court Constr.*, 98 F.3d 1318, 1322, 40 USPQ2d 1450 (Fed. Cir. 1996).

UMC thus stands for the proposition that, even though the technical requirements of a reduction to practice have not been met, a sale or a definite offer to sell a substantially completed invention, with reason to expect that it would work for its intended purpose upon completion, suffices to generate a statutory bar. On the other hand, the court stated that "[i]f the inventor had merely a conception or was working towards development of that conception, it can be said there is not yet any 'invention' which could be placed on sale." *UMC*, 816 F.2d at 657, 2 USPQ2d at 1472. The facts here fit the UMC opinion's hypothetical statement of facts which would fail to constitute a bar much more closely than they fit the actual facts in that case which the court found constituted a bar. We conclude that the undisputed facts concerning Pratt's alleged offer to sell do not constitute an on-sale bar within the meaning of 35 U.S.C. § 102(b) and that the district court erred in holding that they did.

B. *Obviousness*

Micro argues that the district court erred in concluding that the invention of the asserted claims would have been obvious at the time it was made to one skilled in the relevant art. According to Micro, the court erred by combining elements in the prior art without any teaching or suggestion to do so. Lextron responds that the district court correctly applied the law on obviousness.

A determination of obviousness under 35 U.S.C. § 103 is a legal conclusion involving factual inquiries. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1050, 5 USPQ2d 1434, 1438 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988). The district court held that the invention of the patent would have been obvious at the time it was made based upon the combi-

nation of a prior art weighing machine and prior art volume machines. The prior art weighing machine was designated by Sherman Brewster and is referred to as "the Brewster machine." It weighed and dispensed the microingredients sequentially, but had no system for positive intermixing of microingredients with a liquid carrier. When Brewster's customers wanted to use a liquid carrier, the machine would dump the microingredients into a tub of water, which would then be flushed and pumped into a truck containing feed; any mixing occurred only incidentally. The relevant prior art volume machines were manufactured by Lextron. They operated by dispensing microingredients into a mixing tank partially filled with water. The machines included a motor-driven propeller shaft in the mixing tank for mixing the microingredients and the water carrier in order to form a homogenous slurry.

The district court found that one skilled in the art would have been aware of the Brewster weighing machine and that it would have been obvious to combine the features of that machine with those of the volume machines in order to obtain more accurate dispensing of feed additives. The court thus combined the weighing feature of the Brewster machine with the mixing feature of the volume machines, the motivation to combine apparently arising from the knowledge of those skilled in the art of the need for more accurate dispensing of microingredients.

Micro argues, however, that there was no motivation to combine the Brewster weighing machine with the mixers of the volume machine, because the latter produced vibrations that would adversely affect the Brewster machine's sensitive weighing equipment. According to Micro, the Brewster machine failed to adequately isolate the weighing mechanism from vibrations or other motions and consequently performed inaccurately. Lextron responds that the Brewster machine contained an accurate weighing mechanism, as evidenced by the testimony of Brewster's customers who operated feedlots using the machine, and that by having a separate frame for its

slurry delivery system, it would not have the accuracy and isolation difficulties Pratt's invention avoids.

We agree with Micro that the claimed invention would not have been obvious in view of the Brewster weighing machine and the Lextron volume machines. A determination of obviousness must involve more than indiscriminately combining prior art; a motivation or suggestion to combine must exist. *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). As we recently stated:

> Such a suggestion may come expressly from the references themselves. *See, e.g., In re Sernaker*, 702 F.2d 989, 994, 217 USPQ 1, 5 (Fed. Cir. 1983). It may come from knowledge of those skilled in the art that certain references, or disclosures in the references, are known to be of special interest or importance in the particular field. *Cf. Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297 n.24, 227 USPQ 657, 667 n.24 (Fed. Cir. 1985) (stating that the knowledge of one skilled in the art may provide the "teaching, suggestion, or inference" to combine references), *cert. denied*, 475 U.S. 1017 (1986). It may also come from the nature of a problem to be solved, leading inventors to look to references relating to possible solutions to that problem. *See, e.g., In re Rinehart*, 531 F.2d 1048, 1054, 189 USPQ 143, 149 (CCPA 1976) (considering the problem to be solved in a determination of obviousness).

Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). Here, the record contains no evidence of a motivation or suggestion to combine the Brewster weighing machine with the Lextron volume machines. In fact, one skilled in the art would not have been motivated to combine the Brewster machine with the volume machines, because the vigorous motion of the mixing elements in the volume machines would have been expected to cause inaccurate weighing. The prior art therefore

led away from the idea of combining the features of Brewster with the features of the volume machines. Pratt's invention solved the problem by going against the prior art and successfully combining accurate weighing with accurate delivery of microingredients. Pratt was able to combine the features of weighing and positive intermixing only because he added isolation means to achieve consistently accurate weighing in an environment subject to vibrations from mixing equipment.

Pratt's extensive efforts to solve the problem of isolating the weighing system indicate the absence of a suggestion to combine the Brewster machine with the positive intermixing elements of the volume machines. *See In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1532 (Fed. Cir. 1988) (stating that the "five to six years of research that preceded the claimed invention" was entitled to fair evidentiary weight in a determination of nonobviousness). These efforts by Pratt tend to show that one skilled in the art would have had no reasonable expectation of success in combining the prior art machines in question. *See Id.*, 5 USPQ2d at 1531 ("The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art." Long-felt need in the face of prior art later asserted to lead to a solution tends to negate the proposition that the combination of such prior art would have been obvious. We therefore conclude that the district court erred in holding the subject matter of the disputed claims to have been obvious.

C. *Direct Infringement*

Micro argues that the district court erred in its construction of the isolating means of the claims. Lextron responds that the district court properly found that the accused device did not contain a structure equivalent to the isolating means. Specifically, Lextron states that its accused machines achieved isolation by using a rigid mainframe rather than rubber base plates, silicon sealants rather than a separate "weigh frame,"

and compression mounting of the weighing hopper rather than antisway bars.

Determining whether a patent claim has been infringed requires a two-step analysis: "First, the claim must be properly construed to determine its scope and meaning. Second, the claim as properly construed must be compared to the accused device or process." *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1576, 27 USPQ2d 1836, 1339 (Fed. Cir. 1993). Claim construction is a question of law, which we review *de novo*. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979, 34 USPQ2d 1321, 1329 (Fed. Cir. 1995) (in banc), *aff'd*, 116 S. Ct. 1384, 38 USPQ2d 1461 (1996). The application of a properly construed claim to an accused device is a question of fact, which we review for clear error. *General Am. Transp. Corp. v. Cryo-Trans. Inc.*, 93 F.3d 766, 769, 39 USPQ2d 1801, 1803 (Fed. Cir. 1996).

The district court held that the patent was not literally infringed. In particular, it found that the accused machine did not contain the isolating means required by the asserted claims 1, 3, 9, 11, 13, and 45. The court failed to address whether the remaining asserted claims were infringed.

We agree with the district court that the accused device did not use structure corresponding to the isolating means of asserted claims 1, 3, 9, 11, 13, and 45. Literal infringement of a claim containing a means clause requires that the accused device perform the identical function as that identified in the means clause and do so with structure which is the same as or equivalent to that disclosed in the specification. *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042, 25 USPQ2d 1451, 1454 (Fed. Cir. 1993). The patent discloses three primary structures for achieving isolation of the weighing system: rubber base plates, a "weigh frame" separate from the main frame, and an antisway bar attached to the weighing hopper for dampening transverse motions. In comparison, the accused device isolates its weighing system by using a rigid mainframe rather than rubber base plates, silicon sealants rather than a separate "weigh frame," and compression

mounting of the weighing hopper rather than antisway bars. The district court found the structures in question to be significantly different, *i.e.*, structurally nonequivalent, and we conclude that its fact-finding was not clearly erroneous.

Micro argues that the patent disclosed other structures for achieving isolation that were present in the accused device. In particular, Micro asserts that the patent disclosed, and the accused device contained, protective panels, electrical conduits, and rubber isolation pads. We do not agree that these structures meet the claims. First, it is not clear from the record that the protective panels in the accused device performed the function of isolation. A Lextron witness testified that when he observed accused machines with their side panels removed, the machines did not appear to be affected, that air movement did not affect the hopper. Isolation was apparently not the function of the side panels. It has thus not been established that the protective panels in the accused device performed the function set forth in the claims. Likewise, the testimony cited by Micro as establishing that the accused device contained electrical conduits and rubber isolation pads fails to identify the function of those elements and thus fails to establish identical functionality. *See id.*, 25 USPQ2d at 1454 (stating that for a means limitation to read on an accused device it must perform the identical function as specified in the claims).

Micro also argues that the district court made errors of law in its infringement analysis. It cites the district court's statement that the "accused structures in the Lextron weigh machines were also all present, save one, in the Lextron prior art volume machines." Inventions are often a new combination of prior art elements, and thus the fact that particular elements of a claim are present both in the prior art and in an accused device does not negate infringement of a claim consisting of a combination of elements. However, even if the district court's reasoning was in error, as argued by Micro, it does not change the outcome of our review of the infringement determination, as we conclude that the district court's

findings concerning infringement were not clearly erroneous. Accordingly, the district court's statement, even if construed as Micro argues, was harmless error. *See* Fed. R. Civ. P. 61.

Micro argues that the district court erred in requiring equivalents for all three primary disclosed structures in order to meet the isolating means limitation. According to Micro, the disclosed structures are alternatives; therefore an equivalent to any one of the structures is sufficient to meet the claim limitation. The district court analyzed all three accused structures, finding that none of them was equivalent to those disclosed in the patent. In particular, the district court stated, with our emphasis added, that "[n]one of these structures, either *alone* or in combination, can properly be considered 'equivalent' under § 112(6)." The court thus found that the accused machines failed to contain an equivalent to any of the disclosed structures. It did not clearly err in its conclusion of lack of infringement.

Micro also argues that the court erred in failing to make infringement findings regarding the remaining asserted claims, consisting of claims 47, 48, 49, 63, 65, 67, 68, 74, 79, 89, 90, 91, 92, 93, and 94. We agree. Without findings of fact and conclusions of law, we are unable to review the issue of infringement of those claims. *See* Fed. R. Civ. P. 52(a) ("In all actions tried upon the facts without a jury . . . the court *shall* find the facts specially and state separately its conclusions of law thereon. . . .") (emphasis added). Therefore, we must remand for determination of infringement of the remaining asserted claims. We note that not all of the asserted claims include the isolating means limitation. In particular, some of them are method claims which include an isolating *step* rather than an isolating means (see 35 U.S.C. § 112, para. 6). Other asserted claims define a sequential and cumulative weighing feature and lack either an isolating means or step. Upon remand, the district court should determine whether the remaining asserted claims were infringed.

D. *Inducement to Infringe*

Micro argues that the district court clearly erred in finding no inducement to infringe the asserted claims. Specifically, it argues that the district court incorrectly found that the Cactus Feeders machine did not infringe the claims because its use of molasses failed to meet the liquid carrier limitation of the claims in question. In support of its argument, Micro states that U.S. Patent 3,437,075 ("the Hawes patent"), cited in the '971 patent, identifies molasses as a liquid carrier. Lextron responds that the district court correctly found no direct infringement and hence no inducement to infringe because molasses is not a liquid carrier as used with the accused machines.

There can be no inducement to infringe absent direct infringement. *Met-Coil Sys. Corp. v. Korners Unlimited, Inc.*, 803 F.2d 684, 231 USPQ 474, 476 (Fed. Cir. 1986). The district court did not clearly err in its finding that molasses failed to meet the liquid carrier limitation of the claims in question. The record supports the conclusion that molasses, when used as a liquid microingredient, was not a liquid carrier. The Hawes patent, which was part of the relevant prior art, refers to molasses as a liquid microingredient, rather than a liquid carrier. Thus, the district court did not clearly err in finding that the Cactus Feeder's machines combined microingredients with liquid microingredients, rather than mixing microingredients with a liquid carrier, as required by the claims.

E. *Inequitable Conduct*

In its cross-appeal, Lextron argues that Pratt and Leigh engaged in inequitable conduct in three ways. According to Lextron, they deliberately misled the examiner concerning the state of the Brewster machine, intentionally failed to inform the U.S. Patent and Trademark Office ("PTO") of their knowledge concerning the prior art Lextron volume machine, and intentionally and falsely described the need for accuracy in

delivering microingredients. Micro responds that there was no evidence of intent to mislead the examiner and that the volume machine was cumulative prior art and hence not material.

A determination of inequitable conduct is committed to a district court's discretion. Accordingly, we review the court's judgment for abuse of discretion. *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 876, 9 USPQ2d 1384, 1392 (Fed. Cir. 1988), *cert. denied*, 490 U.S. 1067 (1989). To overturn a discretionary ruling of a district court, "the appellant must establish that the ruling is based on clearly erroneous findings of fact or on a misapplication or misinterpretation of applicable law, or evidences a clear error of judgment on the part of the district court." *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178, 33 USPQ2d 1823, 1827 (Fed. Cir. 1995).

Inequitable conduct consists of an "affirmative misrepresentation of a material fact, failure to disclose material information, or submission of false material information, coupled with an intent to deceive." *Id.*, 33 USPQ2d at 1826. One alleging inequitable conduct must prove the threshold elements of materiality and intent by clear and convincing evidence. *Id.*, 33 USPQ2d at 1826-27. The district court must then weigh the threshold findings of materiality and intent in light of all the circumstances to determine whether they warrant a conclusion that inequitable conduct occurred. *Id.*

The district court held that Micro's representatives did not engage in inequitable conduct in the prosecution of the '971 patent. The court found that Leigh and Pratt did not intend to mislead the PTO through their statements characterizing the Brewster machine and that the Lextron volume machine was cumulative prior art and hence not material; thus Leigh and Pratt did not intend to mislead the PTO through their failure to cite it. The court did not make specific findings with respect to the statements about the need for accuracy in delivering microingredients. In spite of its holding that no inequitable conduct occurred, the district court held that the

patent is unenforceable, apparently based upon its invalidity holding.

Lextron argues that Micro's representatives deliberately misled the PTO concerning the qualities of the Brewster weighing machine. According to Lextron, the subjective statements in the '971 patent concerning the Brewster machine were intentionally drafted to be misleading. The following are the statements in question:

> It is believed that at least one weigh-type additive concentrate delivery system has been tried, but unsuccessfully. It is believed that such system weighed and then dispensed each additive separately and sequentially. It is believed that such system was unsuccessful because it was too slow and too inaccurate for handling additive concentrates in a feedlot environment.

'971 patent, col. 2, lines 12-18 (Background of the Invention). Lextron argues that Micro had a duty to verify the facts supporting their statements and that it did not do so. Lextron also cites a statement in an Information Disclosure Statement that Leigh submitted to the PTO. In describing the Brewster machine, he stated that "[f]rom applicant's inspection it appears that such machines . . . all lacked means for isolating the weigh components from external influences during weighing and were therefore highly inaccurate."

We agree with the district court that the prosecution history reviewed as a whole fails to evidence an intent to mislead the PTO. In the portion of the patent quoted above, Pratt stated his personal belief, rather than a representation of facts. Furthermore, in another Information Disclosure Statement, Leigh provided a detailed description of the Brewster machine based upon personal inspection. Leigh identified the alleged isolating means of the Brewster machine and provided reasons why they failed to adequately achieve isolation. In particular, Leigh stated in describing the Brewster machine that the "load cell frame was connected by short, stiff rubber straps to the main frame of the apparatus," and he argued that:

> (5) The short rubber straps mounting the load cell frame to the main frame of the apparatus appeared to be so stiff that they would not provide any appreciable isolation of the weighing components of the apparatus from the main frame.
>
> (6) Also apparently contributing to the lack of isolation and an apparent [sic] source of inaccuracy in the weighing would be the metal hydraulic fluid conduit which in effect connects the hydraulic cylinder on the weigh hopper to the main frame because of its stiffness and spring-like action.

Thus, the record evidences suitable disclosure of the alleged isolation elements of the Brewster machine during prosecution of the patent along with proper arguments as to why those elements failed to adequately achieve isolation.

Lextron also argues that Pratt and Leigh intentionally failed to disclose to the PTO their knowledge of a Lextron volume machine, which it asserts was material prior art. According to Lextron, they were aware of the Lextron machine because of their participation in previous litigation involving that machine. Micro responds that the machine was cumulative prior art and hence not material.

The district court did not clearly err in determining that the Lextron volume machine was cumulative and hence not material. The district court found that the Lextron machine was cumulative to the Hawes patent and U.S. Patent 3,720,185 ("Aldous patent"), both of which were disclosed to the PTO. The district court found that the Aldous patent disclosed a mechanical mixer. It also found that the relevant limitations of the claims included "flow-inducing means," "intermixing," and "positive intermixing," and that the Hawes patent disclosed these elements. Lextron has not established that those conclusions were clearly erroneous. The relevant mixing elements of the Lextron volume machine were thus cumulative and not material.

Lextron further argues that Pratt and Leigh intentionally and falsely described the need for accuracy. According to Lextron, they falsely stated that accuracy must often be within half a gram, considering that government regulations allow for a thirty-five percent margin of error. Micro responds that Pratt and Leigh did not falsely describe the need for accuracy in dispensing microingredients, considering, for example, the industry literature cited in the '971 patent file history describing the need for accuracy in measuring microingredients.

The record contains evidence of industry literature describing the need for accuracy. Moreover, the prior art Hawes patent stated that improved accuracy allowed the use of highly toxic additives without risk of overdose. Pratt and Leigh reasonably could have relied upon that literature as establishing a belief in a need for accuracy within the relevant industry, thereby negating intent to deceive the PTO. Accordingly, the district court did not abuse its discretion in determining that Pratt and Leigh did not engage in inequitable conduct in the procurement of the '971 patent.

We have considered the parties' other arguments and conclude that they are either unpersuasive or unnecessary for resolution of this appeal.

CONCLUSION

The district court erred in holding that the '971 patent was invalid, but did not err in holding that Lextron did not infringe certain of the asserted claims and that the patent was not obtained through inequitable conduct. We therefore reverse the district court's judgment that the asserted claims are invalid under section 102(b), that the patent is invalid under section 103, and that the patent is unenforceable, and we otherwise affirm its judgment. We remand for a determination of infringement of the asserted claims not treated by the district court's opinion and, if necessary, damages.

COSTS

Each party shall bear its own costs.

AFFIRMED-IN-PART, REVERSED-IN-PART, AND REMANDED

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

Nos. 95-1504,-1514

MICRO CHEMICAL, INC.,

Plaintiff-Appellant,

v.

GREAT PLAINS CHEMICAL CO., INC., LEXTRON, INC., and ROBERT C. HUMMEL,

Defendants-Cross/Appellants,

and

WILLIAM PRATT,

Defendant.

MAYER, *Circuit Judge*, dissenting.

Because proper deference to the district court's findings of fact about the on sale bar compels the conclusion that Micro Chemical, Inc.'s patent is invalid, I dissent.

An inventor loses his right to a patent if he placed his invention "in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b) (1994). To invalidate a patent under this section, the party asserting the on sale bar must demonstrate by clear and convincing evidence "that

there was a definite sale or offer to sell more than one year before the application for the subject patent, and that the subject matter of the sale or offer to sell fully anticipated the claimed invention or would have rendered the claimed invention obvious by its addition to the prior art." *UMC Elec. Co. v. United States*, 816 F.2d 647, 656, 2 USPQ2d 1465, 1472 (Fed. Cir. 1987). Once a party asserting the bar proves the existence of an offer and either identity between the offered and patented apparatus or obviousness of the claimed invention in light of the offered apparatus and its teachings, the patent owner can preserve the validity of his patent by "com[ing] forward with evidence to counter that showing." *U.S. Envtl. Prods., Inc. v. Westall*, 911 F.2d 713, 716, 15 USPQ2d 1898, 1901 (Fed. Cir. 1990).

The determination that a product was placed on sale under section 102(b) is a question of law, based on underlying facts. *KeyStone Retaining Wall Sys. Inc. v. Westrock, Inc.*, 997 F.2d 1444, 1451, 27 USPQ2d 1297, 1303 (Fed. Cir. 1993). While we review the district court's ultimate determination of a section 102(b) bar de novo, we review subsidiary facts supporting this conclusion for clear error. *Ferag AG v. Quipp, Inc.*, 45 F.3d 1562, 1566, 33 USPQ2d 1512, 1515 (Fed. Cir. 1995); *U.S. Envtl. Prods.*, 911 F.2d at 715, 15 USPQ2d at 1900.

In reviewing a district court's legal and factual determinations attending section 102(b), this court should resist blurring the distinction between its two separate inquiries, namely the existence of an offer for sale more than one year prior to the critical date, and the sale of subject matter that would fully anticipate or render obvious the claimed invention by its addition to the prior art. A definite and firm belief that the subject matter of a sale would not anticipate or render obvious the claimed invention does not transform a firm offer into a nebulous or indefinite one.

The district court made a well supported finding that William Pratt made a definite offer to Lee Isaac in 1984, based in part on the following facts:

> Mr. Lee Isaac, co-owner of the Sunbelt Feedlot, confirmed that he had several meetings with Mr. Pratt . . . between October, 1984, and the beginning of January, 1985, during which Mr. Pratt offered to place a weigh machine at the Sunbelt Feedlot. Isaac testified that Mr. Pratt had told him "that it [MCI weigh machine] was more accurate than the volume machine." Mr. Isaac also testified that it was his understanding that the machine was . . . ready to be placed at the feedlot as soon as he would place an order.
>
> Mr. Pratt testifies that he reviewed these [no longer existing sales] files and created these notes [entitled "Need Patent Filing Date," one of which states "12/26/84 - MWS machine offered *in person* for 6D e 6L - no date promised. MWS not final version."] after his attorney had explained the need to inform the Patent Office when the first public use or offer for sale of his patented invention occurred.
>
> The Court is unable to reconcile the plain meaning of the words Mr. Pratt wrote and his purported explanation of what those words signify, particularly when the plaintiff meaning of the words is confirmed by the sworn deposition testimony of a third party witness with no interest in this litigation.
>
> In determining the credibility of Mr. Pratt's explanation of the meaning of the entries on this document, the Court notes that, although this document contains purely factual recitations created by Mr. Pratt for his own use before his patent application was filed, and was never sent to Mr. Pratt's attorney, the document was withheld during discovery on the basis of the attorney work product doctrine, and was misdescribed on plaintiff's privileged document list.

As the district court stated, the lack of discussion about price or payment terms during Pratt's offer to Isaac, although

traditionally an indication that no offer was made, is here uninformative because standard practice in the industry was to give these machines to feedlots to at no cost to encourage the purchase of microingredient additives—the primary business of both parties. The fact that Pratt did not describe his apparatus to Isaac beyond saying that it was a weigh machine more accurate than his volume machines, and the fact that Isaac did not understand how the invention worked, are similarly uninformative. In this case, a proper section 102(b) analysis does not focus on the purchaser's knowledge of details about the apparatus or how it works. *See, e.g., RCA Corp. v. Data Gen. Corp.*, 887 F.2d 1056, 1060, 12 USPQ2d 1449, 1452 (Fed. Cir. 1989) (an offer or sale may invoke the statutory bar "even though no details are disclosed"); *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860, 226 USPQ 402, 407 (Fed. Cir. 1985) ("When an executory sales contract is entered into (or offered) before the critical date, the purchaser must know how the invention embodied in the offer will perform. . . . The policies underlying the on sale bar, however, concentrate on the attempt by the inventor to exploit his invention, not whether the potential purchaser was cognizant of the invention. Accordingly, the purchaser need not have actual knowledge of the invention for it to be on sale"). Where the purchaser understands generally how an apparatus would perform, detailed knowledge is even less determinative. As this court stated in *Ferag*, 45 F.2d at 1568, 33 USPQ2d at 1516, "We emphasize that this is an objective test, and that at its heart lies the inventor's attempt to commercialize the invention. . . .[T]he measure of the bar is what was offered, not the patentee's intent."

The focus of the dispute below, and the only remaining proper question for our review of the district court's section 102(b) analysis, should be whether the apparatus offered to Isaac in December 1984 embodied or made obvious the patented invention. Our review of the findings of fact and conclusions of law on this question is driven by policy considerations that underlie this section. *See King Instrument*,

767 F.2d at 860, 226 USPQ at 407. Foremost among these is to prevent inventors from exploiting the commercial value of their inventions beyond the statutory authorization. *See Envirotech Corp. v. Westech Eng'g Inc.*, 904 F.2d 1571, 1574, 15 USPQ2d 1230, 1232 (Fed. Cir. 1990). To accomplish this, inventors are held to the strict requirement that they file their patent applications no more than one year after an attempt to commercialize the invention. Thus, we have held that an inventor does not avoid the on sale bar by continuing to add improvements to his invention after its commercialization. *See, e.g., Seal-Flex, Inc. v. Athletic Track and Court Constr.*, 98 F.3d 1318, 1324, 40 USPQ2d 1450, 1454-55 (Fed. Cir. 1996).

Many factors may influence the determination of an on sale bar within this policy framework. However, because no single factor is controlling, the ultimate determination depends on the totality of the circumstances, that is to say, all of the facts surrounding the transactions, no two of which are alike. *Envirotech*, 904 F.2d at 1574, 15 USPQ2d at 1232. These individual circumstances require factual determinations about the level of skill and state of the art, the nature of the invention, the stage of its development when offered—including which elements of the later claimed patent were being offered and which would be implicitly suggested by the addition of offered elements to the prior art—and evidence of the inventor's intentions during the alleged commercialization. Although we may reverse a trial court's ultimate conclusion that the totality of evidence supports a result, we cannot reverse its factual findings themselves, absent a definite and firm conviction that a mistake has been committed. *Anderson v. City of Bessemer City*, 470 U.S. 564, 573 (1985).

The district court's findings of fact on the second component of the on sale bar issue are as follows:

> [Pratt] had made notes and drawings in December, 1984, illustrating the use of shock absorbing rods and stabilizers on the weigh hopper, flexibly mounting the subframe to prevent vibration transfer and enclosing of the

> entire machine in panels, to prevent air currents and hopper vibrations from affecting the accuracy of his weigh measurements. Pratt also began constructing his mix tank and slurry delivery system in December.
>
> The January 12 prototype had all of the components of the ingredient mixing and slurry delivery systems that are covered by the "mixing" claims of the patent. Mr. Pratt testified that the January 12 system also cumulatively weighed ingredients, and it is apparent that the January 12 machine contained all of the elements disclosed in the "cumulative" weigh claims. In addition, the January 12 machine contained some isolation means, and Mr. Pratt's notes indicate that he was already planning the addition of other isolation means such as panels and stabilizer bars. The Court finds that, at the time Mr. Pratt offered his weigh machines to the Sunbelt Feedlot, he had already built one prototype and was engaged in constructing the January 12 prototype.

Although the evidence was disputed below and on appeal, these factual findings are not clearly erroneous, nor has this court so found them.

Relying on these facts, and not just those that are undisputed, the district court formed a legal conclusion that the totality of circumstances manifests the existence of an on sale bar within the meaning of section 102(b). The district court also held that Micro had not countered defendants' showing. While these facts suggest that the apparatus offered on December 26, 1984, was something less than both the reduction to practice that occurred some two weeks later and the final form of the invention as installed in March, our cases as well as the singularly important underlying policy of preventing inventors from extending the patent term each require that we affirm the existence of an invalidating offer for sale. The addition of elements improving the invention after the attempted commercialization does not trump the district court's separate factual findings: Pratt attempted to com-

mercially exploit an apparatus by offering it to Isaac in December 1984, and the offered apparatus included either every element claimed in the '971 patent or the necessary suggestion to combine the offered elements with prior art, such as existing isolation means, to render obvious any remaining elements.

Micro's arguments on appeal amount to a request that we reverse the holding of an on sale bar because several features of the patented invention were not fully embodied in, or obvious in light of, the apparatus offered for sale to Isaac in December 1984.* Specifically, Micro argues that Pratt had not completed, substantially completed or come close to completing his invention, he was not confident that the invention was "highly likely" to work for its intended purpose, and the invention was not commercially marketable at the time of his offer to Isaac. To support this court's reversal on section 102(b), Micro offers evidence of the development process of Pratt's apparatus, his trial testimony, and requests that we compare the patent claims to the apparatus that Pratt claims existed at the time of the offer.

Micro's evidence and arguments were submitted to the district court, which considered and rejected them during a trial of more than two weeks during which it made credibility determinations that are virtually unreviewable by this court. Moreover, Pratt's testimony about his subjective intentions is unhelpful. *See, e.g., TP Lab. v. Professional Positioners, Inc.*, 724 F.2d 965, 972, 220 USPQ 577, 583 (Fed. Cir. 1984) (in the context of considering objective indicia of experimentation, "the expression by an inventor of his subjective intent . . . particularly after institution of litigation, is generally of minimal value.") The district court found that Pratt's offer to

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* The district court stated that Micro failed to direct the court "to elements of the claims not fully embodied in, or obvious in light of, the January 12, 1985" . . . prototype. The relevant inquiry is what was being offered for sale to Isaac, not whether the January 1985 prototype was substantially the same as the claimed invention. However, this error is harmless.

Isaac added most elements of his '971 patent to the prior art, and this addition rendered obvious all additional elements found in the patent. I see no error. We should refrain from reversing a section 102(b) determination using the secret, subjective and self-interested beliefs of an inventor.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
Judge Zita L. Weinshienk

FILED
UNITED STATES DISTRICT COURT
DENVER, COLO.
Jul 21 1995
JAMES R. MANSPEAR, CLERK

Civil Action No. 88-Z-499

MICRO CHEMICAL, INC.,

Plaintiff,

—v.—

GREAT PLAINS CHEMICAL CO., INC., LEXTRON, INC., and ROBERT C. HUMMEL,

Defendants and Counterclaimants,

—v.—

MICRO CHEMICAL, INC., and WILLIAM PRATT,

Counterclaim Defendants.

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

WEINSHIENK, J.

This matter came before the Court on a suit for patent infringement brought pursuant to 35 U.S.C. §§ 1-307. The Court has subject matter jurisdiction under 28 U.S.C. § 1331 and § 1338(a), as well as *in personam* jurisdiction over the parties. Venue in this judicial district is provided by 28 U.S.C. §§ 1391(c) and 1400(b). Plaintiff, Micro Chemical, Inc. (MCI), charged defendants Lextron, Inc., Great Plains Chemical Co., Inc., and Robert C. Hummel with infringing the patent-in-suit, U.S. Patent No. 4,733,971 ('971 Patent), entitled "Programmable Weight Sensitive Microingredient Feed Additive Delivery System and Method," which issued on March 29, 1988. MCI amended its complaint to add unfair competition claims under Colorado law.

Defendants denied plaintiff's allegations, and asserted counterclaims charging MCI and William Pratt with unfair competition, misappropriation of trade secrets, and violations of the antitrust laws. Defendants also requested a declaratory judgment that all claims of the '971 Patent are invalid, non-infringed, and unenforceable due to plaintiff's inequitable conduct before the United States Patent and Trademark Office (Patent Office). Finally, defendants assert that this action should be deemed an exceptional case pursuant to 35 U.S.C. § 285, warranting the award of attorneys' fees.

Prior to the trial, the parties agreed to dismiss the unfair competition claims against each other. (Second Stipulated Pretrial Order at 2-3). During the trial, the issues of damages and defendants' antitrust counterclaims were bifurcated, and the case proceeded to trial to the Court solely on the issues of patent validity, infringement, inequitable conduct and exceptional case status.

Having considered all the evidence and arguments presented at trial, the Court now makes the following Findings of Fact, Conclusions of Law, and Order.

FACTUAL BACKGROUND

1. MCI, a Texas corporation based in Amarillo, Texas, sells microingredient feed additives, such as vitamins and antibiotics, to large cattle feedlots. MCI provides to its customers, at no charge, machines which both measure the amounts of the microingredient feed additives and mix those ingredients with a liquid carrier to create a slurry. The slurry is then sprayed onto and mixed into a cattle feed ration before the feed is given to the cattle. William Pratt is the founder and president of MCI, and is the named inventor on the '971 Patent. (Ex. 1).

2. Defendants Lextron, Inc. and Great Plains Chemical Co. Inc., are from Greeley, Colorado. Though two names are used in the caption, they are a single Colorado corporation; the name was changed from Great Plains to Lextron in 1986. The name Lextron is used in this Order to refer to both entities collectively. Lextron competes with MCI in microingredients sales. Lextron also provides its customers with machines for measuring the microingredients, at no charge. Lextron's microingredients are also made into a slurry which is applied to a cattle feed ration prior to delivering the feed to the cattle. Defendant Robert C. Hummel is the founder and president of Lextron.

FINDINGS OF FACT

I. THE CATTLE FEEDLOT BUSINESS

3. Cattle typically are kept for about four or five months at a feedlot before being sent to slaughter. In a feedlot, a steer normally consumes approximately 25 lbs. of feed each day, resulting in a weight gain of about 3 lbs. per day. Microingredients are added to feed to promote growth and prevent sickness in the cattle.

4. Typically, feed is prepared in large 8,000 pound batches, which are composed of 7,500 pounds grain and roughage, 420

pounds protein and mineral supplements, and approximately 80 pounds of microingredients and their liquid carrier, most of which is water.

5. To prepare a batch of feed, the grain and roughage are often loaded by a front-end loader into a truck equipped with an auger to mix the feed. Also, the truck normally is equipped with a scale so that individual ingredients can be weighed as they are added to the truck.

6. After the major feed components are in the truck, the supplements are added and mixed into the feed ration by an auger in the truck.

7. After addition of all ingredients, including microingredients, the feed is further mixed in the truck for between one and four minutes as the truck is driven to the cattle pens. A trough, called a bunk, runs along the length of each pen. The feed is delivered into the bunk by a chute from the truck as it drives along next to the bunk.

8. Microingredients typically are added to feed in one of three ways, which have not changed since the 1970's. The most commonly used method is for the feedlot to purchase premixed protein supplements containing the desired microingredients. Measured amounts of the supplements are mixed into the feed ration along with the other ingredients.

9. The second method of adding microingredients is known as the "top dress" method. A bag containing microingredients is opened and the contents are spread directly onto the feed in the bunks. The microingredients applied this way are in a more concentrated form than they are in the protein supplements.

10. The third method of adding microingredients to feed is to use a microingredient feed additive machine. These machines measure predetermined amounts of concentrated microingredients, either by volume or by weight. Some machines deliver the microingredients in dry form to the feed in the truck. Most machines are equipped to create a slurry of

microingredients in a liquid carrier, usually water, which is then pumped out of a receiving tank and sprayed onto the feed and mixed into the batch of feed by the mixer in the truck.

11. One of the advantages of a microingredient additive machine is that it allows the nutritionist to custom formulate the rations given to each group of animals and to make adjustments in the formula, as needed, to maximize growth.

II. THE '971 PATENT

12. William Pratt invented the subject matter of the '971 Patent, and MCI is the owner by assignment of that patent. (Ex. 1.)

13. The '971 Patent claims a programmable weight sensitive feed additive system and method. The Patent Office granted 94 claims on various aspects and combinations of MCI's weigh machine and weighing method inventions in the '971 Patent.

14. Weigh machines built according to the invention are installed at a livestock feeding site, such as a cattle feedlot, where on demand, selected microingredients are dispensed by weight, combined in a slurry, and mixed into batches of feed being delivered to livestock.

15. As testified to both by Mr. Pratt and Mr. Hummel, weigh machines enhance accuracy and reliability. As a result, such machines have been commercially successful, and have been in demand from livestock feedlots.

III. ON-SALE BAR

16. In a handwritten note bearing the date 10/31/85 and the title, "Need Patent Filing Date," Mr. Pratt made several notes after reviewing sales filed on MCI's dealings with the Sunbelt Feedlot in Hugoton, Kansas. (Ex. 117.) Mr. Pratt testified that he reviewed these files and created these notes after his attorney had explained the need to inform the Patent Office when the first public use of offer for sale of his patented invention

occurred. The files Mr. Pratt reviewed in creating these notes no longer exist.

17. The entries germane to the offer of the weigh machine are set forth below:

12/05/84 - Thought about offering MWS [Micro Weigh System] - made notes to self.

12/25/84 - Phone said had been working on a weigh system - would have it ["available by" crossed out] in production by Feb. 1, 1985 - installation possible by March 1?

12/26/84 - MWS machine offered *in person* for 6D e 6L - no date promised. MWS not final version. (Ex. 117.)

18. Mr. Lee Isaac, co-owner of the Sunbelt Feedlot, confirmed that he had several meetings with Mr. Pratt, as well as several telephone conversations between October, 1984, and the beginning of January, 1985, during which Mr. Pratt offered to place a weigh machine at the Sunbelt Feedlot. Isaac testified that Mr. Pratt had told him "that it [MCI weight machine] was more accurate than the volume machine." Mr. Isaac also testified that it was his understanding that the machine was not in an experimental stage but ready to be placed at the feedlot as soon as he would place an order. Under cross-examination by plaintiff's attorney, Mr. Isaac reaffirmed his understanding that Mr. Pratt had offered him a weigh machine that was ready to be placed in his feedlot. Mr. Isaac's diary contains several entries reflecting meetings and conversations with Mr. Pratt in November and December, 1984. (Ex. TV.)

19. Mr. Pratt testified that his notations did not mean what they appeared to say. Where his notes indicated that the machine would be "in production by February 1, 1985," Mr. Pratt testified that this really meant only that a "production size machine" would be built by that date. Mr. Pratt further

testified that where his notes said "installation possible by March 1," he actually meant that a machine might be ready to test in a feedlot by that date. Also, Mr. Pratt stated that what he in fact offered to Mr. Isaac was a volume machine, and that the notation MWS prior to the reference to an offer was only a reminder to himself that there had been some discussion of the weigh machine with Mr. Isaac, but it did not relate to the machine actually offered to Mr. Isaac.

20. The Court is unable to reconcile the plain meaning of the words Mr. Pratt wrote and his purported explanation of what those words signify, particularly when the plain meaning of the words is confirmed by the sworn deposition testimony of a third party witness with no interest in this litigation. Accordingly, the Court finds that Mr. Pratt did offer to place a weigh machine in the Sunbelt feedlot on December 26, 1984.

21. In determining the credibility of Mr. Pratt's explanation of the meaning of the entries on this document, the Court notes that, although this document contains purely factual recitations created by Mr. Pratt for his own use before his patent application was filed, and was never sent to Mr. Pratt's attorney, the document was withheld during discovery on the basis of the attorney work product doctrine, and was misdescribed on plaintiff's privileged document list. The document was produced only after this Court affirmed Magistrate Judge Donald E. Abram's ruling that plaintiff had waived all claims of privilege and after the Court ordered the production of all previously withheld documents.

22. Mr. Pratt testified in great detail relating to the development of his patented weigh machine from its conception in January, 1984, through the first commercial placement at the Randall County feedlot on March 20, 1985, in an attempt to show that his invention was not sufficiently developed to have been "on sale" at the time of his discussions with Mr. Isaac. Mr. Pratt stated that in the Spring of 1984 he built a prototype that included a dry ingredient storage bin which dispensed a

dry ingredient into a pan suspended from a load cell which was operated by computer controls. After several months of testing various load cells, around July, 1984, Mr. Pratt built a second prototype with a separate frame using weigh bars connected to the receiving tray by rubber straps. (Ex. 177, 178.) By mid-December, 1984, Mr. Pratt had constructed a prototype with a 6 inch metal segmented weigh hopper that was rotatable by hand.

23. Mr. Pratt's development efforts accelerated in December, 1984, and on January 12, 1985, he conducted the "first complete weigh cycle of a full-scale prototype machine substantially as depicted in Figs. 4, 5, 6, 7, 8 and 9 of U.S. Patent No. 4,733, 971 and described in the accompanying specification of the patent." (Plaintiff's Response to Defendants' Interrogatory No. 5, Ex. UP.)

24. Mr. Pratt testified that the January 12, 1986, prototype had two dry ingredients storage bins, one liquid ingredient storage bin, associated dispensing devices, and a weigh subframe that was attached by bolts with rubber grommets to prevent metal to metal contact between the weigh frame and the main frame. The weigh hopper was suspended from two load cells contained in towers as shown in the '971 Patent. The prototype contained a segmented, rotatable weigh hopper with separate compartments for four dry and two or three liquid ingredients. The weigh hopper rotated to dump the dispersed ingredients into an elongated mix tank with two motor driven propeller-like mixers. The plumbing was in place to fill the mix tank with water, and a discharge pump was in place to evacuate the slurry of microingredients and water. The January 12 machine was equipped with a Hardy Accubatch II computer which controlled the dispensing and cumulative weighing of the dispensed microingredients. Electronic switches were used to fill the mix tank with water, rotate the weigh hopper, turn the mixers on and off, activate the discharge pump and to activate the flush cycle of the mix tank. (Ex. DI).

25. Prior to January 12, 1985, Mr. Pratt's development documents indicate that he was aware of the need for a means to prevent the transfer of vibrations to the load cell, and to prevent outside influences from causing the weigh hopper to move. He had made notes and drawings in December, 1984, illustrating the use of shock absorbing rods and stabilizers on the weigh hopper, (Ex. 180), flexibly mounting the subframe to prevent vibration transfer and enclosing of the entire machine in panels, (Ex. 179), to prevent air currents and hopper vibrations from affecting the accuracy of his weigh measurements. Pratt also began constructing his mix tank and slurry delivery system in December. (Ex. 185.)

26. The January 12 prototype used two 25 pound load cells manufactured by the Revere Corporation, the same load cells used in MCI's currently offered weigh machines. As reflected in tests run on the weigh machine on January 13, 1986, (Ex. UM), the weigh machine model was capable of achieving fairly consistent results in its dispensation of microingredients on that date.

27. Mr. Pratt continued to modify and improve his weigh machine and, by mid-February, 1985, he had completed construction of a second machine which was allegedly capable of achieving more accurate results because it incorporated additional isolation means that were not present in the January 12 machine. The second machine utilized a separate weigh frame, (Ex. 241), rubber isolation pads to isolate the load cell from vibrations of the weigh hopper or the main frame, longitudinal and lateral stabilizers on the weigh hopper, and a variable three speed mixer in the mix tank. The February machine was controlled by two RCA computers.

28. The February prototype was demonstrated to a group of bankers from Tulsa, Oklahoma, who visited Mr. Pratt's plant on February 28, 1985. Mr. Pratt characterized this demonstration of his weigh machine as its first public use. (Ex. 117.)

29. On March 20, 1985, Mr. Pratt installed a weigh machine at the Randall County Feedyard. (Ex. 117.) After

doing a few hours of tests, the machine was used to prepare cattle feed beginning the same day. Additional modifications were made to the machine subsequent to its installation to solve vibration problems and other problems that had not been apparent previously. On April 1, 1985, Mr. Pratt installed another newly built weigh machine in a feedlot in Garden City, Kansas.

30. Plaintiff supplemented its interrogatory responses twice to attempt to move the date of reduction of practice of the patented invention from January 12, 1985, as stated in the original interrogatory response, (Ex. UP), to April 20, 1985, after the Randall County Feedyard machine had been operating successfully to prepare cattle feed for 30 days. (Ex. UQ, UR.)

31. Although Mr. Pratt's testimony and development notes indicate that he did not perfect the commercial embodiment of his machine until the end of March or the beginning of April, 1985, many of the modifications made to the machine by Mr. Pratt after January 12, 1985, did not relate to the invention covered by the claims of the '971 Patent. For example, Mr. Pratt testified that variations in auger size and auger speed, which are not mentioned in the patent claims, have a significant effect on the accuracy of the weight determinations. Similarly, he testified to wiring changes he made after he placed a machine at Randall County Feedlot which have nothing to do with his claimed invention.

32. Although Mr. Pratt testified that the separate weigh frame and isolation pads were "critical" isolation features not present on his January 12 prototype, after learning that Lextron was not using any isolating means in its weigh machine, Pratt discussed with his attorney the possibility of adding claims to his application which did not include any limitation calling for isolating means. (Ex. 243 at 54, 56.) A preliminary amendment adding such claims was subsequently filed by MCI's patent attorney, James Leigh. (Ex. 2 at 123-135.)

33. The January 12 prototype had all of the components of the ingredient mixing and slurry delivery systems that are covered by the "mixing" claims of the patent. Mr. Pratt testified that the January 12 system also cumulatively weighed ingredients, and it is apparent that the January 12 machine contained all of the elements disclosed in the "cumulative" weigh claims. In addition, the January 12 machine contained some isolation means, and Mr. Pratt's notes indicate that he was already planning the addition of other isolation means such as panels and stabilizer bars.

34. The Court finds that, at the time Mr. Pratt offered his weigh machine to the Sunbelt Feedlot, he had already built one prototype and was engaged in constructing the January 12 prototype. Mr. Pratt has not convinced the Court that his work subsequent to January 12 constituted the kind of experimentation that would remove his offer to Sunbelt from the ambit of 35 U.S.C. § 102(b).

IV. INFRINGEMENT

35. Plaintiff's expert witness on patent law, Jacob Vilhauer, testified that Lextron has manufactured and placed in feedlots four different types of weigh machines, as follows: Type 1 machines utilized cumulative weighing; Type 2 machines utilized sequential weighing; Type 3 machines had no mechanical mixers in the receiving tank; and Type 4 machines had "down stream" or "remote" mixers. These machines were sold by Lextron to the Cactus Feedlots in Etter, Texas, the Wrangler Feedlot in Tulea, Texas, the Stratford Feedlot in Stratford, Texas, and the FSW Cattle Company. (Ex. 17.)

36. Plaintiff has stipulated that Lextron Type 3 machines, the type without a mechanical mixer in the mix tank, do not infringe any claim in the '971 Patent.

37. Mr. Vilhauer analyzed the Lextron weigh machines for infringement by categorizing the asserted claims of the '971 Patent in 3 groups: isolation claims; cumulative weighing

claims; and mixing claims. He stated that not all cumulative weighing claims require cumulative weighing. Mr. Vilhauer also stated that he had not sought to determine whether any Lextron weigh machines infringed any claims of the '971 Patent under the doctrine of equivalents. (Ex. 11.)

38. Mr. Vilhauer included claims 1, 3, 9, 13, 45, 63, 74, 91, 93 and 94 in his grouping entitled isolation claims, and testified that Lextron's Type 2 weigh machines infringed all of those claims. He further testified that the compression mount used by Lextron was the "functional equivalent" of the sway bar disclosed in the patent-in-suit. He further stated that the red rubber horizontal alignment pad, located under the ear of the Lextron weigh hopper, acted as an isolator, as did the silicone seal between the microingredient storage bins and the machine frame. On this point, both Steven Godsey, the electrical engineer who had assisted in building both MCI's and Lextron's first weigh machines, and Charles Hoff, a Lextron design engineer who assisted in the development of the Lextron weigh machine, testified to the contrary. Mr. Vilhauer also testified that the panels on the Lextron weigh machine functioned as an isolator. Contrary to the testimony of James Leigh, MCI's patent attorney, Mr. Vilhauer testified that the rigid frame of the Lextron weigh machine is not an isolator as defined in the patent.

39. The Court disagrees with Mr. Vilhauer's analysis. Under the last paragraph of 35 U.S.C. § 112, "isolation means" cannot be interpreted to include specific isolators or combinations of isolators not disclosed in the specification and structural equivalence thereof. The compression mounting of the load cells used by Lextron is not the structural equivalent of the anti-sway bars disclosed as an isolating means in the patent. However, the Court agrees with Mr. Vilhauer that there is no structural equivalent to the rigid frame utilized in the Lextron machine disclosed as an isolating means in the patent.

40. The Court further finds that the panels on the weigh machine, the silicone sealant between the storage bins and the frame of the machine, and the horizontal alignment pads used in the weigh machine were also all present in the Lextron volume machine. That these structures in the prior art Lextron volume machines may inherently perform an isolating function in the Lextron weigh machine does not mean that Lextron's continuing use of these old components in its weigh machines can now be found to constitute an infringement of Mr. Pratt's patent. In addition, plaintiff has failed to demonstrate where the equivalent of Lextron's use of silicone seal is shown in the patent.

41. The Court finds that neither the specific isolator nor the combination of isolators alleged by plaintiff to be included in Lextron's machines are the structural equivalents of the specific combination of isolators disclosed in the '971 Patent. Accordingly, Lextron's machines do not literally infringe the "isolating means" limitation in any asserted claim of the '971 Patent.

42. Mr. Vilhauer found that Lextron's Type 4 machines infringed claims 1, 3, 45, 63, 74, 93 and 94. His opinion was based on characterization of the weigh pot, and the various Cactus Feedlots machines as being a remote mix tank.

43. The Court disagrees with Mr. Vilhauer's conclusion. The mixing claims of the '971 Patent require the creation of a slurry between the microingredients and a liquid carrier prior to their addition to the cattle feed. As pointed out by Charles Hoff, weigh pots used in the Cactus Feedlots are actually the scales for the macroingredients in liquid form. Mr. Vilhauer conceded during cross-examination that the Cactus Feedlots weigh pots mix macroingredients such as liquid feed supplements, sugar and molasses. These liquid macroingredients cannot be characterized as "liquid carriers," and adding microingredients to these liquid macroingredients is essentially the same as adding the microingredents to the dry macroingredients. Thus, to the extent a surry is created

downstream of the receiving tank in the Type 4 machines, it is not a slurry of microingredients and a liquid carrier but rather a slurry of microingredients and the liquid macroingredients.

44. A second reason why the Lextron Type 4 machines do not infringe the '971 Patent is that plaintiff has not alleged that Lextron's sale of its weigh machines to Cactus Feedlots constituted a direct infringement, but only that it constituted inducing infringement. As testified to by Mr. Hoff, none of the machines sold by Lextron to Cactus Feedlots had mechanical mixers. In fact, Lextron sold no-mix volume machines for placement in the Cactus and Stratford Feedlots. MCI has failed to introduce any evidence showing that Lextron was aware that, by selling to Cactus Feedlots machines without a mixer in the mix tank, which concededly do not infringe any claim of the '971 Patent, it could be found liable for patent infringement. Absent such proof of intent, MCI has failed to meet its burden of proving that Lextron is liable for inducing infringement.

V. WILLFUL INFRINGEMENT

45. MCI has alleged that Lextron should be held liable for willfully infringing the '971 Patent for the period of time from the institution of this litigation until it obtained the second opinion from Dressler, Goldsmith that the '971 Patent was invalid. (Ex. 114.) The Court cannot agree.

46. Plaintiff has stipulated that the Dressler, Goldsmith opinions are not sham opinions and that Lextron reasonably relied upon them.

47. Defendant Robert Hummel testified, and the actions of Lextron reflect, that Lextron relied upon those opinions, initially by converting their machines from cumulative weighing and removing the mixers, and subsequently by replacing the mixers in some of their machines.

48. The Court finds that, even if Lextron could be found to have infringed any claim of the '971 Patent, such infringement cannot be characterized as willful. MCI commenced this suit within days after the '971 Patent issued. As soon as it was sued, Lextron began efforts to design around the patent and took affirmative steps to follow the advice it had obtained from outside patent counsel to avoid infringing the patent. The four month time period between the commencement of this suit and when Lextron received the written opinion of counsel is not an unreasonable length of time considering the number and complexity of the claims in the '971 Patent.

VI. FRAUD OR INEQUITABLE CONDUCT ON PATENT OFFICE

49. Lextron asserts that Mr. Pratt and Mr. Leigh engaged in inequitable conduct or fraud on the PTO by mischaracterizing the weigh machine developed by Sherman Brewster and by withholding information about the Great Plains volume machine. This Court disagrees with Lextron's assertions.

50. With respect to the Brewster weigh machines, special efforts were made by Mr. Pratt and Mr. Leigh to learn about the few Brewster machines that existed. These actions include having the machines looked at by MCI employees, taking a special trip in March, 1986, to Kansas and Oregon to examine each of the Brewster machines actually placed in feedlots, and an additional personal inspection of the Brewster Boardman weigh machine in May, 1987, by James Leigh. They also received representations about the Brewster weigh machines from Sherman Brewster himself (Ex. 174). As a result of these investigations, additional and accurate information was provided to the Patent Office in the Supplemental Information Disclosure filed August 28, 1986 (Ex. 2 at 27), and in the Third Supplemental Information Disclosure filed July 21, 1987 (Ex. 2 at 167; *see also* Ex. 69), both of which were submitted prior to the notice of allowance of the '971 Patent. (*See* Ex. 258.)

51. Although Mr. Leigh and Mr. Pratt stated in the patent application that "[I]t is believed that [the Brewster machine] was unsuccessful because it was too slow and too inaccurate for handling additive concentrates in a feedlot environment" (Ex. 2, p. 7), Lextron has failed to prove by clear and convincing evidence that either Mr. Pratt or Mr. Leigh believed such characterizations to be false or incorrect, or that they intended to deceive the patent examiner with these characterizations.

52. Lextron also asserts that part of the inequitable conduct or fraud on the Patent Office was the failure to disclose the prior Great Plains volume machine. It is undisputed that the Great Plains volume machine was not specifically described in materials submitted to the Patent Office. Mr. Pratt and Mr. Leigh each testified that the reason for not specifically describing the Great Plains volume machine was that it simply did not cross their minds to do so. They did disclose the prior art Hawes patents on volume machines, as well as the Pratt volume machine patent and other relevant prior art. They successfully had completed a patent infringement trial in front of then Chief Judge Sherman Finesilver of this Court, in which Judge Finesilver had ruled that the Great Plains volume machine infringed three of the Hawes patents which were disclosed to the Patent Office. (Ex. 115.) Therefore, in their minds at the time, the Hawes patents and the Great Plains volume machine probably were synonymous.

53. Lextron, in its sworn answers to MCI's initial interrogatories in this case about prior art, *itself* forgot to list the Great Plains volume machine as relevant prior art. (*See* Defendants' Response to Plaintiff's First Set of Interrogatories, Answer to Interrogatory 12, sworn to June 17, 1988, Ex. 233.) These were later supplemented by Defendants and Counterclaim Plaintiffs' Response To Plaintiff's And Counterclaim Defendants' Second Set of Interrogatories, Answers To Interrogatories 20 and 23, served January 18, 1989. (Ex. 234.)

54. Lextron argues that its volume machine contained prior art not previously disclosed in the Hawes patents, namely the mechanical mixer of the Great Plains volume machine. However, the MCI patent application disclosed the Aldous patent, which was prior art having a mechanical mixer in batch mixers used in feedlots to create a slurry of dry feed and liquids in small quantities. (Ex. 2, p. 72; Ex. GF, '185 Patent.) Moreover, the asserted claims of the '971 Patent do not require mechanical mixers or mixing, but more broadly claim "flow-inducing means", "intermixing", or "positive intermixing" to form a slurry, elements which are shown in the prior art Hawes and Pratt volume machine patents. (See, *e.g.*, Ex. 1, claims 63 and 74.)

55. The failure to describe the Great Plains volume machine did not create a situation where material prior art was not disclosed, but at most was a failure to disclose prior art which was cumulative to the Hawes and Aldous prior art which was disclosed in the '971 Patent application and prosecution.

56. Lextron argues that Mr. Leigh's intent to deceive and the importance of omitting a description of the Great Plains volume machine is shown by the evolution of what became the '971 Patent's Claim 94, as that claim was prosecuted in the Patent Office. The prosecution history shows instead that no intent to deceive was present, and that the patent examiner's knowledge of the mechanical mixer of the Great Plains volume machine would have made no difference.

57. In any case, Lextron has failed to prove by clear and convincing evidence that the failure to describe specifically the Great Plains volume machine during the '971 Patent prosecution was an omission of material, non-cumulative prior art and was done by either Mr. Pratt or Mr. Leigh with the intention to deceive the Patent Office.

VII. MISUSE OF PATENT BY TYING

58. Both MCI and Lextron provide weigh machines to the feedlots without charge in the hope and anticipation that those feedlots will then purchase microingredients from the machine supplier. MCI enters into an "acknowledgement" with each of its customers to which it provides weigh machines, (Ex. 70), which provides that the weigh machine remains the property of MCI, and establishes several operating conditions for the machine which are designed to allow the machines to operate effectively and safely. The acknowledgement specifically allows the user to obtain microingredients from suppliers other than MCI. Thus, in pertinent part, the acknowledgment provides as follows:

> d. *USER is not prohibited from using micro ingredients from others*; however, USER recognizes that it is in the best interest of both USER and MCI that the MICRO INGREDIENT SYSTEM operates accurately and dependably on every portion of feed treated by USER. USER also recognizes that certain stringent quality control standards exist for the physical and biological characteristics of feed micro ingredients utilized through the system. Such characteristics include potency, bulk density/flowability, hygroscopic nature, particle size, oil/dust content, physical/biological stability and viscosity.
>
> e. USER recognizes that no assurances can be given by MCI regarding standards of MICRO INGREDIENT SYSTEM performance or proper delivery into the feed *if ingredients are utilized that are not obtained from MCI* or which have not satisfied equivalent quality control standards with respect to the physical and biological characteristics described in paragraph d. above.
>
> (Ex. 70, par. 2, emphasis added.)

59. Mr. Pratt testified that he has never entered into an agreement or understanding with a customer requiring the

customer, contrary to the terms of the written acknowledgement, to purchase microingredients from MCI. He gave examples of customers who had purchased microingredients from other sources without having their machines removed and customers who have purchased relatively small amounts of microingredients from MCI without having their machines removed. (Ex. 238.)

60. MCI has quality control standards for microingredient formulations used in its dispensing machines. (Exs. 75, 73.) Although MCI strongly encourages its feedlot customers to allow MCI to spot test the quality of the microingrdients [sic] that the customers are obtaining from other suppliers and using through MCI's weigh machines, there was no evidence presented that MCI has ever removed a machine or threatened such removal if the customer failed to obtain those tests. Furthermore, MCI has tested microingredients provided by other sources and has approved those microingredients for use in MCI's machines. MCI has taken no actions to suggest that the acknowledgement is breached by customers who do not acquire their microingredients from MCI, or do not have them tested by MCI. The acknowledgement was not entered into as a result of force or threats by MCI. (*See* Isaac Dep. (12/13/89) at 17-18; Gottsch Dep. at 10-15; Park Dep. at 14-16, 18, 21-22.)

61. Lextron presented no evidence that MCI coerced any customers into purchasing microingredients from MCI that the customers would not otherwise have purchased from MCI, and did not show that the MCI acknowledgement entered into by MCI's customers was a sham.

62. Lextron's President, Robert Hummel, testified that Lextron's own customers purchase virtually all of their microingredients from Lextron. Mr. Hummel specifically denied that Lextron's customers are subject to any agreements that require them to purchase from Lextron or are subject to any coercion from Lextron. Thus, the fact that customers purchase all or most of their microingredients from the weigh machine

supplier is not clear and convincing evidence, or even a preponderance of the evidence, of an express agreement or of coercion creating a misuse of the weigh machine patent by tying its free use to the purchase of microingredients.

63. The Court finds that MCI did not misuse the patent by tying, or conditioning, its provision of free weigh machines to feedlot customers to the purchase of the customers' microingredient requirements from MCI.

VIII. RELEVANT MARKET

64. The livestock or cattle feeding industry is comprised of more than 550 feedlots with a capacity of more than 4,000 head of cattle, more than 390 of which have capacities in excess of 8,000 head. Most of these feedlots are located in the Great Plains portion of the United States, with a significant majority of the feedlots being located in Nebraska, Kansas, Colorado, Texas and Oklahoma. As of December 31, 1991, MCI had placed approximately 110 weigh machines in feedlots, and Lextron had placed approximately 45. (Exs. 172, 278, OR.)

65. Both because of the nutritional requirements for cattle in feedlots and because of special health needs created as a result of the close confinement of large numbers of animals, all cattle in feedlots are fed special vitamins, disease prevention drugs, growth inducing drugs and other nutritional and health products.

66. These products are sold in several different forms. Feed supplements generally contain the foregoing vitamins and drugs, and are sold in relatively unconcentrated form in bulk which can be mixed easily into the cattle's basic food rations. These vitamins and drugs may also be provided in the form of "top dressing." More than 50% of the feedlots still utilize feed supplements or top dressing as the basic means for delivering all ingestible vitamins and drugs to livestock in the feedlot. (Exs. 172, OR.) Feed supplements and top dressing

are readily substitutable for microingredients, both in terms of cost and convenience.

67. The Court finds that the relevant market for this case is the market for ingestible vitamins and drugs used in feedlots.

IX. MISCELLANEOUS FACTS

68. All relevant acts of Mr. Pratt have been taken as president of MCI and properly within the scope of his duties.

69. All relevant acts of Mr. Hummel have been taken as president of Lextron and properly within the scope of his duties.

CONCLUSIONS OF LAW

I. CLAIM INTERPRETATION

70. A patent consists of a specification, which is a written description of the invention; drawings, which illustrate the invention; and numbered claims. The claims of a patent define the metes and bounds of the invention. The claims are to be read and interpreted in view of the patent drawings, the patent specification, and the file history of the patent application before the U.S. Patent and Trademark Office. *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 336 U.S. 271, 277 (1949); *Arachnid, Inc. v. Medalist Marketing Corp.*, 972 F.2d 1300, 1302 (Fed. Cir. 1992). Expert testimony and the other claims of a patent may also be considered to interpret claim language. *McGill Inc. v. John Zink Co.*, 736 F.2d 666, 673-75 (Fed. Cir.), *cert. denied*, 469 U.S. 1037 (1984).

71. Proper claim interpretation is necessary before a determination of infringement or validity can be made. Claim interpretation is a question of law. The claims must be interpreted the same way for validity as they are for infringement. *Jonsson v. Stanley Works*, 903 F.2d 812, 821 (Fed. Cir. 1990);

Smithkline Diagnostics, Inc. v. Helena Laboratories Corp., 859 F.2d 878, 882 (Fed. Cir. 1988).

72. The claim language should be read in accordance with the rules of the English language, using dictionary definitions to interpret the words unless it appears clear that the patentee used them in some different way. Although the applicant is permitted to be his own lexicographer, the definitions used cannot be inconsistent with the normal usage of a word. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-1388 (Fed. Cir. 1992).

73. Where a patentee chooses to give terms uncommon meanings, he must set out his uncommon definition in some manner within the patent disclosure. The words must be used in the same way in the claims and in the specification. However, limitations from the specifications are not to be read into the claims. Further, narrow claim limitations cannot be read into broad claims either to avoid invalidity or escape infringement. *E.I. Du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1432-34 (Fed. Cir.), *cert. denied*, 488 U.S. 986 (1988); *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir.), *cert. denied*, 448 U.S. 892 (1988).

74. The patent specification must conclude with claims "particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112. In order to be definite under § 112, the claims when read in light of the specification must reasonably apprise those skilled in the art both of the utilization and the scope of the invention. 35 U.S.C. § 112; *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385 (Fed. Cir. 1986). An imprecise limitation does not necessarily impart invalidity to the claims, but the imprecision is a factor to be considered in a determination of infringement. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 842 F.2d 1275, 1280 (Fed. Cir. 1988).

75. Certain claims of the '971 Patent are expressed as a means for performing a specified function without reciting specific structure or materials to accomplish such function. These "means-plus-function" claims are construed to cover the corresponding structure set forth in the patent specification and equivalents thereof with identical function. Like the other claims which are allegedly infringed, such claims may not be given a meaning which would also cover a prior art reference or device. *Valmont Industries Inc. v. Reinke Manufacturing Co. Inc.*, 983 F.2d 1039, 1041-42 (Fed. Cir. 1993); *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 933-34 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961 (1988). A specific means-plus-function clause of the '971 Patent is the "isolating means" limitation of Claim 1. When determining the meaning of the term "isolating means," the Court must look to the specific isolators or combination of isolators disclosed in the specification.

A. *Accuracy*

76. A central claim interpretation issue of the present case revolves around the meaning of the term "accuracy" as used in the claims. This term must be construed as it would by one of ordinary skill in the art based on the patent disclosure. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d at 1387.

77. At various times, MCI's witnesses expressed different opinions on the meaning of this term. None of the definitions given by MCI's witnesses was entirely satisfactory. It appeared that MCI's patent law expert, Mr. Vilhauer, struggled with the dilemma that if he construed this term as well as the term "isolating means" narrowly enough to provide a basis for urging patent validity, the patent would not be infringed, while if he read them broadly enough to provide a basis for an infringement claim, the teachings of the patent would be obvious.

78. Mr. Vilhauer has limited experience in batch weigh systems. His testimony on the meaning one skilled in the art

would ascribe to terms in the patent cannot be totally relied upon. Thus, his opinion as to the meaning of terms in the patent should be afforded limited weight.

79. Claim 64 defines "an accuracy of at least ± one gram." The prior art Hough reference which was before the patent examiner defines accuracies within 0.01 pounds (4.5 grams). Although the specification discloses 0.5 gram accuracy, the Court believes it would be error to incorporate this limitation into the claims, particularly where to do so would result in a narrower interpretation of the independent claims of the patent than dependent claim 64. Thus, the Court concludes that the term "accuracy" as used in the independent claims of the '971 Patent refers to accuracies between 1 gram and 4.5 grams. No other definition is consistent with the patent disclosure in view of the prior art of record in the file history of the patent. Moreover, there is no other definition which would apprise one skilled in the art of the metes and bounds of the invention in a sufficiently definite manner to comply with 35 U.S.C. § 112.

B. *Slurry*

80. The term "slurry" appears numerous times in the patent claims. During trial, MCI's witnesses testified that this term should be interpreted as being restricted to a "homogeneous slurry." The Court finds no support for such a limitation in the specification, the file history or the claims of the patent. The patent disclosure calls for mixing feed additives in a liquid carrier to "dilute, disperse and suspend" them. *See* Col. 1, lines 54-60; Col. 3, lines 44-47. This would seem to disclose to a person of skill in the art that a mixture of additives and carrier is required, not necessarily a uniform or homogeneous mixture.

C. *Mixing v. Positive Mixing*

81. A third significant claim interpretation issue involves the meaning of the terms "intermixing" and "positive inter-

mixing." MCI's position, as expressed by Mr. Vilhauer, is that these terms mean the same thing, i.e., simply "mixing." But this interpretation is contradicted by the file history of the '971 Patent. The original application Claim 42 called only for "intermixing" the feed additives. This claim was rejected by the patent examiner and withdrawn by the applicant. The claim was then re-submitted as calling for "positive intermixing," and was subsequently allowed by the patent examiner, as Claim 94 of the patent. The applicant's attorney argued before the Patent Office that the claim was now distinguished over the "known prior art." Since the prior art before the patent examiner included various references which disclosed "mixing," the term "positive mixing" should be construed as being limited to a type of mixing which was not before the Examiner. The only such type which was not before the examiner and is also supported by the patent specification is mechanical mixing.

II. VALIDITY

82. An issued patent is presumed valid. 35 U.S.C. § 282. This statutory presumption of validity places the burden on a party challenging the validity of a patent to establish facts demonstrating invalidity by clear and convincing evidence. This burden is always on the party asserting invalidity of a patent, regardless of whether the best prior art was before the patent examiner, although the burden may be more easily carried by evidence consisting of more pertinent prior art than that considered by the examiner. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir.), 469 U.S. 851 (1984). All evidence bearing on the validity issue, whether considered by the Patent Office or not, is to be taken into account by the tribunal in which validity is challenged. *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360 (Fed. Cir.), *cert. denied*, 469 U.S. 821 (1984).

83. The "clear and convincing" standard of proof of facts is an intermediate standard which lies between the "beyond a

reasonable doubt" and "preponderance of the evidence" standards. "Clear and convincing" evidence has been described as evidence which produces an abiding conviction that the truth of the assertions is highly probable. *Colorado v. New Mexico*, 467 U.S. 310, 316 (1984), *reh'g denied*, 468 U.S. 1224 (1984); *Buildex Inc. v. Kason Industries, Inc.*, 849 F.2d 1461, 1463 (Fed. Cir. 1988). Under the "clear and convincing" standard, proof need not be airtight. "The law requires persuasion, not perfection". *Id.* at 1464.

III. ANTICIPATION

84. A claim is invalid if it is anticipated under 35 U.S.C. § 102. Anticipation is established when a single prior art reference discloses, expressly or under principles of inherence, each and every element of a claimed invention. The determination of anticipation is a question of fact. *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1449 (Fed. Cir. 1984), *cert. dismissed, Hazeltine Corp. v. RCA Corp.*, 468 U.S. 1228 (1984).

85. The Court believes that some of the claims of the '971 Patent, including Claim 1, may well be anticipated by the Brewster prior art weigh machines. However, the Court finds it unnecessary to resolve this issue in view of the findings made on the obviousness inquiry into patent validity.

86. The Court notes that a defense based on paragraph one of 35 U.S.C. §112 was previously dismissed by the Court, and that no § 112 defense was listed by defendants in the Pretrial Order. However, some testimony at trial was directed to the issue of whether the claims of the '971 Patent complied with the requirement of the second paragraph of 35 U.S.C. § 112 that the claims particularly point out and distinctly claim the subject matter which the applicant regards as his invention. *See, e.g.*, Milnamow Tr. 1989-91. It appears that this issue may have been tried by the "implied consent of the parties." Fed. R. Civ. P. 15(b). Because the Court finds that all of the claims of the '971 Patent are invalid and unenforceable for

other reasons, the Court makes no express finding on this issue.

IV. OBVIOUSNESS

87. Even if a particular combination of elements is "novel" in the literal sense of the term, it will not qualify for federal patent protection if its contours are so traced by the existing technology in the field that the "improvement is the work of the skillful mechanic, not that of the inventor." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 149-150 (1989). The purpose of the patent laws is to reward those who make some substantial discovery or invention. *Atlantic Works v. Brady*, 107 U.S. 192, 199-200 (1882).

88. The nonobviousness requirement extends the field of unpatentable material beyond that which is known to the public under § 102 to include that which could readily be deduced from publicly available material by a person of ordinary skill in the pertinent field of endeavor. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. at 149-150; *Graham v. John Deere Co.*, 383 U.S. 1, 15 (1966).

89. A claim may be held invalid if it is obvious under 35 U.S.C. § 103. Obviousness is established when the claimed invention as a whole, in light of all of the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. The question of obviousness is reached after answers to a series of fact questions have been found, and in the light of those answers *Graham v. John Deere Co.*, 383 U.S. at 17. These questions relate to the scope and content of the prior art; differences between the prior art and the claims at issue; the level of ordinary skill in the art; and any objective evidence, known as secondary considerations, which may be present as indicia of nonobviousness. *Ryko Manufacturing Co. v. Nu-Star, Inc.*, 950 F.2d 714, 716 (Fed. Cir. 1991).

90. Title 35 U.S.C. § 103 requires a Court to presume full knowledge by the inventor of the prior art in the field of his endeavor as well as analogous arts. The proper way to apply the 35 U.S.C. § 103 obviousness test is to picture the inventor as working in his shop with the prior art references hanging on the walls around him; then when he encounters a problem, he examines the references for the solution. The claims of a patent are invalid when the invention was made merely by applying knowledge clearly present in the prior art.

91. It is not necessary that the prior art suggest expressly, or in so many words, the changes or possible improvements the inventor made. It is only necessary that the prior art implicitly supplied the necessary suggestion to a person of ordinary skill that the prior art teaching could be employed to obtain the claimed invention. *FMC Corp. v. Hennessy Industries, Inc.*, 836 F.2d 521, 527 (Fed. Cir. 1987); *Fromson v. Advance Offset Plate, Inc.*, 755 F.2d 1549, 1556 (Fed. Cir. 1985).

92. The Court has previously set forth some findings as to prior art. The evidence is clear and convincing that the differences between the subject matter of the claims of the '971 Patent and the prior art are such that the subject matter of the claims as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the batch weigh system art.

93. In addition to the claims asserted by MCI, the Court has considered the remaining patent claims. All of these claims may be separated into three groups, as they were by MCI's patent law expert; (1) isolation claims; (2) cumulative weigh claims; and (3) mixing claims. The broadest claims of the patent are the mixing claims. The Court finds that the other patent claims do not contain any limitations that would render them nonobvious when considered as a whole in light of the prior art references. *See N.V. Akzo v. E.I. DuPont de Nemours & Co.*, 810 F.2d 1148, 1152 (Fed. Cir. 1987).

94. The most pertinent prior art references are the Brewster machines and the Lextron volume machines. The only differences between the claims of the patent and the Brewster references are that certain claims require that mixing occur in the mixing vessel prior to discharge of the slurry while other claims call for cumulative weighing or multiple weighings of the feed additives before discharge from the weigh hopper.

95. One having ordinary skill in the batch weigh system art would have been well aware of the option of employing a mechanical mixer in order to obtain a more thorough blending of the feed additives and the water carrier prior to discharge. The Lextron prior art volume machines employed a mechanical mixer for this purpose. Similarly, various witnesses, including the inventor, Mr. Pratt, testified that cumulative weighing was a well-known expedient in the art.

96. The principal difference between the Lextron volume machines and the subject matter claimed in the patent is that the microingredient feed additives are not weighed by the Lextron machines. However, one having ordinary skill in the art would have been aware of the weigh mechanisms used in the Brewster machines, and it would have been obvious to employ such a mechanism to obtain more accurate dispensing of the feed additives. To the extent that the patent claims describe other differences, none renders the claimed subject matter nonobvious.

97. The Court has considered allegations of secondary considerations of nonobviousness. MCI argued that the present invention solved an accuracy problem prevalent in the prior art, and so achieved commercial success, and that it came after unsuccessful efforts by others.

98. "Secondary indicia" of invention such as commercial success must be considered during an obviousness determination. *Graham v. John Deere Co.*, 383 U.S. at 17; *Stratoflex Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983). However, while secondary indicia must be considered, they do not

control the obviousness inquiry. No amount of commercial success or other secondary indicia can save a patent claim obvious in fact. *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 768-9 (Fed. Cir. 1988), *cert. denied*, 493 U.S. 814 (1989); *Merck & Co. v. Biocraft Laboratories, Inc.*, 874 F.2d 804, 809 (Fed. Cir. 1989), *cert. denied*, 493 U.S. 975 (1989).

99. MCI presented evidence of Lextron's unsuccessful effort to design a weigh machine in 1984-85 as support for a conclusion of nonobviousness. The Court determines that this evidence is entitled to little weight in the obviousness inquiry. First, the project was given a low priority and then discontinued. There is no evidence of a concerted effort by Lextron to design a new device until the fall of 1985. Furthermore, although Lextron's initial efforts did not result in a commercially viable design, the fact that Lextron engineers were working on a weight based dispensing system would tend to suggest that the concepts employed by the '971 Patent were obvious to those skilled in the art. *See Vandenberg v. Dairy Equipment Co.*, 740 F.2d at 1567.

100. MCI also offered evidence in support of a finding of commercial success. The weight given to commercial success becomes particularly problematic when it follows "once another supplied the key element" and there was no longer "a problem to be solved." *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d at 768 (1989); *Calmar Inc. v. Cook Chemical Co.*, 383 U.S. 1, 36 (1966). Here, Brewster contributed the key element: an accurate weight based feed additive weigh machine, before Mr. Pratt conceived the alleged invention. Commercial success is also problematic in this case because MCI has not sold a single machine. The machines are simply given away, i.e., provided to the feedlot customers for free.

101. The Court finds that no amount of commercial success, or other objective evidence, can save the patent claims in issue. The claims are obvious.

V. PATENT MISUSE—TYING

102. A tying arrangement is a marketing method whereby one party will provide or sell one product (the "tying product"), only on the condition that buyers also purchase a different product (the "tied product"). *Northern Pac. Ry. Co. v. United States*, 356 U.S. 1, 5-6 (1958); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 12 (1984).

103. Lextron claims that MCI's provision of free weigh machines to customers with the acknowledgment that the customer will purchase all its microingredients from MCI is an unlawful tying arrangement, in which weigh machines are the tying product and microingredients are the tied product. In order to prevail on this defense, Lextron must prove by clear and convincing evidence that weigh machines and microingredients are separate and distinct products; that microingredients are a staple item of commerce; that MCI has actually tied its provision of weigh machines to the purchase of microingredients from MCI; and that MCI has market power in the relevant market. *See Senza-Gel Corp. v. Seiffhart*, 803 F.2d 661, 664-65 (Fed. Cir. 1986); 35 U.S.C. § 271(d)(5).

104. The Court concludes that, for purposes of the patent misuse defense, weigh machines and microingredients are separate and distinct products. *See Senza-Gel*, 803 F.2d at 670. The separate and distinct product test is different for an antitrust claim, and the Court expresses no view as to whether weigh machines and microingredients are separate products in that context. *See Jefferson Parish*, 466 U.S. at 18-22; *Hirsch v. Martindale-Hubbell, Inc.*, 674 F.2d 1343, 1347 (9th Cir.), *cert. denied*, 459 U.S. 973 (1982).

105. Microingredients are a staple item of commerce since they have uses outside of the patent. *Polysius Corp. v. Fuller Co.*, 709 F. Supp. 560, 576 (E.D.Pa. 1989), *aff'd*, 889 F.2d 1100 (Fed. Cir. 1989).

106. A tying arrangement could be found to exist between weigh machines and microingredients if MCI refused to provide weigh machines unless customers also expressly agreed to buy microingredients exclusively from MCI. In the absence of an express tying requirement between MCI and the feedlots using its weigh machines, a tying arrangement can only be found to exist if MCI employed coercive conduct effectively to coerce feedlots into buying feed additives from it when they would have preferred to purchase such ingredients from other suppliers. *See Belliston v. Texaco, Inc.*, 455 F.2d 175, 183-84 (10th Cir.), *cert. denied*, 408 U.S. 928 (1972).

107. In determining whether coercion has taken place, it is not enough that MCI made strong efforts to persuade, encourage or cajole customers into buying its microingredients. Rather, it must be shown that MCI has actually forced customers to buy both products, and that any appearance of choice was merely a sham. *See Bogosian v. Gulf Oil Corp.*, 561 F.2d 434, 449-51 (3d Cir. 1977), *cert. denied*, 434 U.S. 1086 (1978); *Advance Business Systems & Supply Co. v. SCM Corp.*, 415 F.2d 55, 64-68 (4th Cir. 1969), *cert. denied*, 397 U.S. 920 (1970).

108. Since the court has found that MCI's only agreement with its customers specifically provides that the customers may purchase microingredients from any source, and that such agreement is not a sham, Lextron's misuse by tying defense cannot succeed on the ground unless MCI has coerced its customers into purchasing its microingredients.

109. Since the Court has found that there is no evidence that MCI coerced its customers to purchase its microingredients, the Court concludes that Lextron's patent misuse by tying defense must fail.

110. Because of the above finding, the Court does not need to make a determination on the issue of MCI's relevant market power.

VI. ON-SALE BAR

111. Title 35 U.S.C. § 102(b) provides that an inventor is not entitled to a patent on his invention if it was "in public use or on sale in this country more than one year prior to the date of the application for patent in the United States. . . ." The statutory bar of § 102(b) is strictly construed. A patentee is not allowed to attempt to derive any commercial benefit from his invention outside of the one year window provided by the statute for filing his patent application. *Bonito Boat, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. at 149; *Consolidated Fruit-Jar Co. v. Wright*, 94 U.S. 92, 94 (1877).

112. Determination of whether a § 102(b) bar exists is a question of law. *Sonoscan, Inc. v. Sonotek, Inc.*, 936 F.2d 1261, 1263 (Fed. Cir. 1991). A flexible approach to § 102(b) is necessary because of the infinite variety of commercial practices to which the on-sale bar may be applied. *Western Marine Electronics, Inc. v. Furuno Electric Co.*, 764 F.2d 840, 844 (Fed. Cir. 1985); *National Cash Register Co. v. American Cash Register Co.*, 178 F. 79, 83 (2d Cir. 1910).

113. In determining whether an on-sale bar exists, the totality of the circumstances must be considered because the policies or purposes underlying the on-sale bar, in effect, define it. *Envirotech Corp. v. Westech Engineering, Inc.*, 904 F.2d 1571, 1574 (Fed. Cir. 1990). The primary policy governing the application of § 102(b) is to prevent commercial exploitation outside the one-year grace period authorized by Congress. *King Instruments Corp. v. Otari Corp.*, 767 F.2d 853, 860 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1016 (1986); *Gould Inc. v. United States*, 579 F.2d 571, 580 (Cl. Ct. 1978).

114. It is not necessary that a sale be consummated in order for a patent to be held invalid under § 102(b). *Buildex, Inc. v. Kason Industries, Inc.*, 840 F.2d 1461, 1464 (Fed. Cir. 1988). All that is needed is a firm offer prior to the critical date. Even a single offer, whether accepted or not, may constitute

a bar. *RCA Corp. v. Data General Corp.*, 887 F.2d 1056, 1062 (Fed. Cir. 1989).

115. There is no requirement that the patentee have the product actually on hand at the time of the offer for the statutory bar to be triggered. There is likewise no requirement that the patented invention be in its final form or that it be commercially marketable for a statutory bar to arise. In fact, it is immaterial for purposes of the statutory bar that the device was makeshift. *Barmag Barmer Maschinenfabrik AG v. Murata Machine, Ltd.*, 731 F.2d 831, 836 and 838 (Fed. Cir. 1984); *American Sunroof Corp. v. Cars & Concepts, Inc.*, 660 F. Supp. 1, 3-4 (E.D. Mich. 1984), *aff'd*, 776 F.2d 1064 (Fed. Cir. 1985). Further, there is no requirement that the patented invention be reduced to practice in order for an offer for sale to invalidate the patent. *UMC Electronics Co. v. United States*, 816 F.2d 647, 656 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1025 (1988). If the machine was offered for future delivery, the statutory bar applies even if delivery was not to take place until after the critical date. *Buildex Inc. v. Kason Industries, Inc.*, 849 F.2d at 1464.

116. Section 102(b) may create a bar to patentability either alone, if the device placed on sale is an anticipation of the later claimed invention or, in conjunction with 35 U.S.C. § 103, if the claimed invention would have been obvious from the on-sale device in conjunction with the prior art. *Labounty Manufacturing, Inc. v. U.S. International Trade Commission*, 958 F.2d 1066, 1071 (Fed. Cir. 1992); *UMC Electronics Co. v. United States*, 816 F.2d at 656.

117. The application for the '971 Patent was filed on February 26, 1986. The critical date prior to which no commercial exploitation can have occurred is, therefore, February 26, 1985.

118. The Court finds that defendants have shown that Mr. Pratt offered to place a weigh machine in the Sunbelt Feedlot on December 26, 1984. Once a defendant makes a *prima facie*

case of an on-sale bar, the patent owner bears the burden of coming forward with convincing evidence to counter that showing. *U.S. Environmental Products, Inc. v. Westall*, 911 F.2d 713, 716 (Fed. Cir. 1990); *Hycor Corp. v. Schuleter Co.*, 740 F.2d 1529, 1537 (Fed. Cir. 1984).

119. MCI contended that, because it does not "sell" its weigh machines to its feedlot customers, but places them in the feedlots at no charge, the offer to Mr. Isaac was not the type of commercial exploitation that § 102(b) prohibits. The Court disagrees. MCI's practice of placing weigh machines at feedlots at no charge in order to sell microingredients is merely one example of "the infinite variety of commercial practices" to which the on-sale bar may be applied. *Philco Corp. v. Admiral Corp.*, 199 F. Supp. 797, 815 (D. Del. 1961). MCI's sales representative testified at deposition that the purpose of MCI's various contacts with Mr. Isaac was to make a sale. Whether MCI received payment for the machine or made its money through the sale of microingredients for use in the "free" machine is irrelevant. The offer to place a weigh machine in the Sunbelt Feedlot is the type of commercial exploitation which the statute prohibits from occurring more than one year prior to the patent application filing date. *See Strong v. General Electric Co.*, 434 F.2d 1042, 1046-47 (5th Cir. 1970), *cert. denied*, 403 U.S. 906 (1971); *George R. Churchill Co. v. American Buff Co.*, 365 F.2d 129, 133-34 (7th Cir. 1966).

120. MCI also argued that there could not have been a definite offer for sale because, at the time the offer was made, Mr. Pratt did not know whether his weigh machine would work for its "intended purpose," i.e., he did not know whether it would be more accurate than the Brewster weigh machine and other, prior volume machines in a feedlot environment. MCI's argument is an attempt to introduce a requirement that the patented invention must be commercially marketable for the statutory bar to apply. Such a broad brush approach that the experimental use justification must be applied to the subject

matter of the offer as a whole could lead to circumvention of the purposes of the on-sale bar. *See RCA Corp. v. Data General Corp.*, 887 F.2d at 1061-62. For example, under MCI's argument, the weigh machine could never be offered for sale because actual placement at the feedlot is required.

121. The Court concludes that it was the patented invention which was offered to Mr. Isaac at the Sunbelt Feedlot, notwithstanding plaintiff's argument that further development was needed before the patented invention was actually reduced to practice. MCI contends that the machine could not have been reduced to practice until it was operated in the harsher feedlot environment to which it would be subjected in commercial use. Even if this proposition is accepted, MCI failed to direct the Court's attention to any feature of the claims at issue that was not fully embodied in, or obvious in light of, the January 12, 1985 operation of the prototype weigh machine. *See Labounty v. U.S. International Trade Commission*, 958 F.2d at 1071; *Stearns v. Beckman Instruments, Inc.*, 737 F.2d 1565, 1568-69 (Fed. Cir. 1984); *General Electric Co. v. United States*, 654 F.2d 55, 63-64 (Cl. Ct. 1981).

122. Mr. Pratt's subjective expressions that he was still experimenting on his invention after January 12, 1985, are entitled to little weight since they were expressed for the first time at trial. The Court notes that MCI's initial interrogatory responses stated that the invention had been reduced to practice on January 12, 1985. *See Western Marine Electronics, Inc.*, 764 F.2d at 842; *In re Brigance*, 792 F.2d 1103, 1108 (Fed. Cir. 1986); *RCA Corp. v. Data General Corp.*, 701 F. Supp. 456, 466 (D. Del. 1988), *aff'd*, 887 F.2d 1056 (Fed. Cir. 1989).

123. The basis of the on-sale inquiry is whether the inventor thought he had a product which could be and was offered to customers. The objective evidence here indicates that Mr. Pratt offered the patented invention to Mr. Isaac at the Sunbelt Feedlot with the intention of commercial exploitation

without any suggestion that the machine was still in the experimental stage. If Mr. Pratt held a secret belief that the device which was offered might not be accurate enough in a feedlot environment and thus unsatisfactory to customers, that is insufficient to avoid the legal conclusion of the § 102(b) statutory bar. *See Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.*, 984 F.2d 1182, 1187-88 (Fed. Cir. 1993); *Harrington Mfg. Co. v. Powell Mfg. Co.*, 815 F.2d 1478, 1481 (Fed. Cir. 1986). In addition, many of the modifications testified to by Mr. Pratt as occurring after that date relate to non-claimed features of the device and are therefore irrelevant to whether the claimed invention was on-sale. *Western Marine Electronics, Inc.*, 764 F.2d at 847; *Harrington Mfg. Co. v. Powell Mfg. Co.*, 815 F.2d at 1481.

124. MCI's argument that the patented invention was still in development and that its use at Randall County Feedlot was an experimental use also is unavailing. The Court finds that the primary purpose of the Randall County installation was for commercial benefit, not experimentation. There was no testimony offered from a Randall County representative that the use of the machine was for experimental purposes. In fact, no evidence of experimentation was introduced at trial other than through the testimony of Mr. Pratt. Further, the fact that the Randall County weigh machine was used to prepare feed for cattle within a few hours of its installation weighs against MCI's claim that the machine was used experimentally for nearly a month after installation. *See Labounty Manufacturing, Inc. v. U.S. International Trade Commission,*, 958 F.2d at 1071-72; *Electric Storage Battery Co. v. Shimadzu*, 307 U.S. 5, 20 (1939).

125. The Court concludes that defendants have shown by clear and convincing evidence that Mr. Pratt offered his patented invention to Mr. Isaac of the Sunbelt Feedlot more than one year prior to the filing of the patent application. MCI has failed to counter that showing. Accordingly, the '971 Patent is invalid pursuant to 35 U.S.C. § 102(b).

VII. LITERAL INFRINGEMENT

126. In order to find literal infringement, one must literally read each and every element of a properly interpreted claim onto a corresponding element in an allegedly infringing embodiment. *Stewart-Warner Corp. v. Pontiac*, 767 F.2d 1563, 1570 (Fed. Cir. 1985). Infringement may also be made out under the doctrine of equivalents. *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. at 608. However, at trial, MCI alleged only literal infringement, and the Court similarly will limit its analysis. *Nestier Corp. v. Menasha Corp.*, 739 F.2d 1576 (Fed. Cir. 1984), *cert. denied*, 470 U.S. 1053 (1985).

127. The infringement determination is a two step process. First, the claims are construed as a matter of law. Then the claims as interpreted are applied to the accused product as a fact question. *Charles Greiner & Co. v. Mari-Med Mfg. Inc.*, 962 F.2d 1031, 1034 (Fed. Cir. 1992); *Becton Dickinson & Co. v. C.R. Bard Inc.*, 922 F.2d 792, 796 (Fed. Cir. 1990).

128. The patentee bears the burden of proving infringement by a preponderance of the evidence. *Amstar Corp. v. Envirotech Corp.*, 823 F.2d 1538, 1545 (Fed. Cir. 1987). The failure to meet a single limitation is sufficient to negate infringement of the claim. *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1535 (Fed. Cir. 1991).

129. Having found the claims at issue invalid, it is axiomatic that Lextron cannot be held liable for infringement of the claims. Nevertheless, the Court makes the following findings regarding infringement.

VIII. INFRINGEMENT OF "MEANS-PLUS-FUNCTION" CLAIMS

130. Claim 1 of the '971 Patent contains several limitations which are expressed in means-plus-function terms. The most significant of these, and the subject of a fairly substantial portion of the trial record, is the "isolation means" element. In

particular, Claim 1 calls for "isolating means for isolating said weighing means from influences affecting the weighing function of said weighing means so accurate weight determinations are obtained". MCI contends that Claim 1 and dependent Claims 3, 9, 11, 13 and 45 are literally infringed.

131. Under 35 U.S.C. § 112(6), to satisfy a means-plus-function limitation literally, the accused device must perform the identical function required by the limitation and must incorporate the structure disclosed in the specification, or its substantial structural equivalent, as the means for performing that function. *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580 (Fed. Cir. 1989).

132. If § 112(6) did not exist, claim language which requires only a means for performing a function might be indefinite. *Jonsson v. Stanley Works*, 903 F.2d 812 (Fed. Cir. 1990); *Data Line Corp. v. Micro Technologies, Inc.*, 813 F.2d 1196, 1201 (Fed. Cir. 1987). While the use of means-plus-function language in a claim is clearly permissible by reason of § 112(6), a means clause does not cover *every means* for performing the specified function. Rather,

> [Section 112(6)] means exactly what it says: To determine whether a claim limitation is met literally, where expressed as a means for performing a stated function, the court must compare the accused structure *with the disclosed structure*, and must find equivalent *structure* as well as *identity* of claimed *function* for that structure.

Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc; emphasis in original) (citations omitted), *cert. denied*, 485 U.S. 961 (1988).

133. Various means and combinations for isolating the weighing function, referred to as "isolators" during trial, are disclosed in the '971 patent application. Several MCI witnesses compared the accused Lextron machines with the disclosed structures in an effort to demonstrate literal infringement. The Court finds that this effort falls short of

establishing infringement. First, MCI erroneously argues that if an accused structure performs the function required by the claim it is structurally equivalent. That view has been specifically rejected by the Federal Circuit and cannot form the basis for an infringement finding. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d at 934. The Court further finds that the accused structures in the Lextron weigh machines are significantly different from those disclosed in the patent specification. *Valmont Industries, Inc. v. Reinke Mfg. Co.*, 983 F.2d at 1044-45; *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d at 1538-39.

134. Moreover, the combination of isolator profiles disclosed in the specification are likewise strikingly different from the combination of accused structures in Lextron's weigh machines. In an effort to prove infringement, MCI's witnesses testified that the rigid main frame of Lextron's machine was equivalent to the rubber base plate pads disclosed in the specification, the silicone sealants around the Lextron dispensing bins were equivalent to a separate frame, and the amount of the Lextron weigh hopper in compression was equivalent to the use of sway bars. None of these structures, either alone or in combination, can properly be considered "equivalent" under § 112(6). Were the Court to find that the Lextron isolator profile represents an infringement of the patent, it would, in effect, be granting Mr. Pratt a monopoly on the concept of isolation. *See Gardner v. TEC Systems, Inc.*, 725 F.2d at 1349.

135. The accused structures in the Lextron weigh machines were also all present, save one, in the Lextron prior art volume machines. Lextron's witnesses testified that the function of these structures remained the same when incorporated in the weigh machine. The Court finds that these previously incorporated structures cannot now be said to perform an identical function as the structures disclosed in the patent specification. *See Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d at 1388-89. The one feature that was not present in the

Lextron volume machine was a pad supporting the load cell. Although the Court finds that this feature performs an isolating function, MCI has not identified a structural equivalent in the specification. In short, MCI has failed to meet its burden of proof for a finding of infringement of Claim 1. For the same reasons that Claim 1 is not infringed, dependent Claims 3, 9, 11, 13 and 45 also are not infringed.

IX. INDUCING INFRINGEMENT

136. MCI further contends that Lextron has induced infringement of Claims 1, 3, 45, 63, 74, 93 and 94 by its provision of weigh machines to feedlots owned by Cactus Feeders. Under § 271(b), "[w]hoever actively induces infringement of a patent shall be liable as an infringer." To reach the issue of inducing infringement, the patentee must first demonstrate direct infringement. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 341 (1961).

137. Since the Court has found that MCI failed to satisfy its burden of proof to establish direct infringement, there can be no finding of inducing infringement.

X. WILLFUL INFRINGEMENT

138. A finding that patent infringement has been willful naturally presumes a threshold finding of infringement. Since the court has determined that there is no infringement, the claim for willful infringement is moot.

139. However, the Court will note that Lextron's conduct cannot be held as willful. The '971 patent issued after the accused Lextron machines were already on the market. Three days after issuance, MCI brought suit. Lextron immediately retained patent counsel to work with Lextron's engineers on a machine which would clearly avoid infringing all 94 claims of the patent. Such a machine was designed and its non-infringing status was confirmed in a lengthy opinion prepared by the Dressler, Goldsmith firm which was submitted to Lex-

tron's president, Dr. Hummel, on August 23, 1988. Thereafter, a second opinion, directed to the validity of the patent, was prepared by the Dressler, Goldsmith firm on November 7, 1988. MCI's claim for willfulness ends as of that date. Both of the Dressler, Goldsmith opinions provide a reasonable basis for Lextron's action, and they were, in fact, relied upon by Lextron.

140. The Court finds that Lextron acted with due regard for MCI's patent. Accordingly, even were the Court to have found literal infringement, there can be no willful infringement.

ORDER

Based on the foregoing Findings of Fact and Conclusions of Law, it is

ORDERED that Claims 1, 3, 9, 11, 13, 45, 47, 48, 49, 63, 65, 67, 68, 74, 79, 89, 90, 91, 92, 93 and 94 of United States Patent No. 4,733,971 be, and the same are hereby, declared invalid under 35 U.S.C. § 102(b). It is

FURTHER ORDERED that United States Patent No. 4,733,971 be, and the same is hereby, declared invalid under 35 U.S.C. § 103. It is

FURTHER ORDERED that United States Patent No. 4,733,971 be, and the same is hereby, declared unenforceable. It is

FURTHER ORDERED that judgment shall be entered in favor of the defendants, Lextron, Inc. and Robert C. Hummel, and against the plaintiff, Micro Chemical, Inc., on plaintiff's Complaint, and that plaintiff's Complaint shall be dismissed with prejudice. It is

FURTHER ORDERED that the Clerk shall enter judgment in favor of defendants Lextron, Inc., and Robert C. Hummel and against plaintiff Micro Chemical, Inc., on defendants' coun-

terclaim for declaratory judgment that United States Patent No. 4,733,971, is invalid and not infringed. It is

FURTHER ORDERED that because this Court is unable to conclude that this is an exceptional case, the parties shall pay their own costs and attorneys fees. It is

FURTHER ORDERED that the Court determines that there is no just reason for delay, and expressly directs that judgment may enter pursuant to Fed. R. Civ. P. 54(b).

DATED at Denver, Colorado, this 21 day of July, 1995.

BY THE COURT:

/s/ ZITA L. WEINSHIENK
ZITA L. WEINSHIENK, Judge
United States District Court

July __, 1995

Civil Action No. 94-Z-2613

CERTIFICATE OF MAILING

The undersigned hereby certifies that on the above date copies of FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER entered by Judge Zita L. Weinshienk and filed on July 21, 1995, were mailed to the following:

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By /s/_____
Deputy Clerk

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

Filed Mar 3, 1997

ORDER

Before ARCHER, Chief Judge, MAYER, Circuit Judge, and LOURIE, Circuit Judge.

A petition for rehearing having been filed by the CROSS-APPELLANT, and a response thereto having been invited by the court and filed by the APPELLANT,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED.

The mandate of the court will issue on March 10, 1997.

FOR THE COURT
JAN HORBALY, CLERK

Dated: March 3, 1997

by /s/ BRIAN P. LEDUC
Brian P. LeDuc
Associate Chief Deputy Clerk

cc: JOHN P. PINKERTON
DENNIS J. MONDOLINO

MICRO CHEMICAL V GREAT PLAINS, 95-1504, -1514
(DCT-88-Z-499)